

# TC-K611S/K707ES/K711S

## SERVICE MANUAL



Photo: TC-K611S

*US Model*  
*Canadian Model*

TC-K611S/K707ES

*AEP Model*

TC-K611S/K711S

*UK Model*


TC-K611S

*E Model*

TC-K707ES

*Australian Model*

TC-K611S/K707ES

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism		TC-K679ES/K690
Tape Transport Mechanism Type	TC-K611S	TCM-200V15
	TC-K707ES	TCM-200V16
	TC-K711S	TCM-200V17

### SPECIFICATIONS

Recording system	4-track 2-channel stereo
Fast winding time	Approx. 90 sec. (with Sony C-60 cassette)
Bias	AC bias
Heads	Erasing head × 1 (TC-K707ES/K711S: S&F head, K611S: F&F head) Recording head × 1 (SD head) Playback head × 1 (TC-K611S/K711S: SD head, K707ES: LA head)
Motors	Capstan motor × 1 (DC servo motor) Reel motor × 1 (DC motor) Assist (mechanism drive) motor × 1 (DC motor)

Signal-to-noise ratio (at peak level and weighted)

Cassette (Dolby NR off)	Type IV (Sony ES-IV)	Type II (Sony UX-S or UX)	Type I (Sony HF-S)
	61 dB	59 dB	57 dB

S/N ratio improvement (approximate values)

With Dolby B NR on : 5 dB at 1 kHz; 10 dB at 5 kHz  
With Dolby C NR on : 15 dB at 500 Hz; 20 dB at 1 kHz  
With Dolby S NR on : 10 dB at 100 Hz; 24 dB at 1 kHz

Harmonic distortion	0.4% (with Sony HF-S, 160 nWb/m, 315 Hz, 3rd H.D.)
	1.5% (with Sony ES-IV, 250 nWb/m, 315 Hz, 3rd H.D.)

Frequency response (Dolby NR off)

Type IV cassette (Sony ES-IV)	TC-K707ES: 20—21,000Hz (±3dB, IEC) TC-K611S/K711S: 20—20,000Hz (±3dB, IEC) 20—16,000Hz [±3dB (−4dB recording)]
Type II cassette (Sony UX-S or UX)	TC-K707ES: 20—19,000Hz (±3dB, IEC) TC-K611S/K711S: 20—18,000Hz (±3dB, IEC)
Type I cassette (Sony HF-S)	20—17,000 Hz (±3 dB, IEC)

Wow and flutter	±0.09% W.Peak (IEC)
	0.05% W.RMS (NAB)
	±0.14% W.Peak (DIN)

Inputs

Line inputs (phono jacks)	Sensitivity	0.16 V
	Input impedance	47 k ohms

Outputs

Line outputs (phono jacks)	Rated output level	0.5 V at a load impedance of 47 k ohms
	Load impedance	Over 10 k ohms
Headphones (stereo phone jack)	Output level	0 - 3 mW at a load impedance of 32 ohms

—Continued on next page—

**STEREO CASSETTE DECK**  
**SONY®**

## SAFETY CHECK-OUT

### General

Power requirements	US, Canadian model: 120V AC, 60Hz AEP, German model: 220—230V AC, 50/60Hz UK, Australian model: 240V AC, 50Hz E model: 120V, 220V, and 240V AC adjustable, 50/60Hz
Power consumption	21 W
Dimensions	Approx. 430 × 123 × 306 mm (w/h/d) (17 × 4 <sup>7</sup> / <sub>8</sub> × 12 <sup>1</sup> / <sub>8</sub> inches) including projecting parts and controls
Mass	TC-K707ES/K711S: Approx. 5.0kg (11 lbs 1 oz) TC-K611S: Approx. 4.8kg (10 lbs 10 oz)

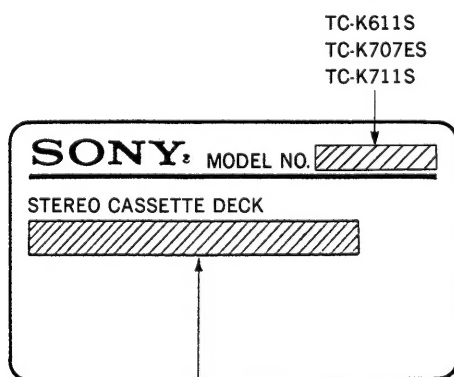
### Supplied accessories

Audio connecting cords (2)

Design and specifications are subject to change without notice.

### MODEL IDENTIFICATION

—Specification Label—



US, Canadian model : AC 120V 60Hz 21W  
AEP, German model : AC 220—230V~50/60Hz 21W  
UK, Australian model: AC 240V~50/60Hz  
E model : AC 120, 220, 240V~50/60Hz 21W

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

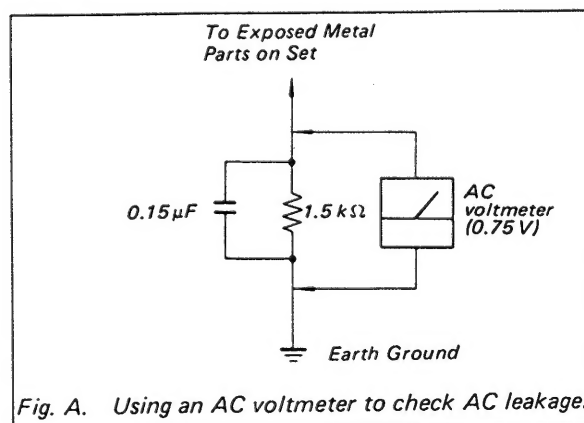


Fig. A. Using an AC voltmeter to check AC leakage.

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

## TABLE OF CONTENTS

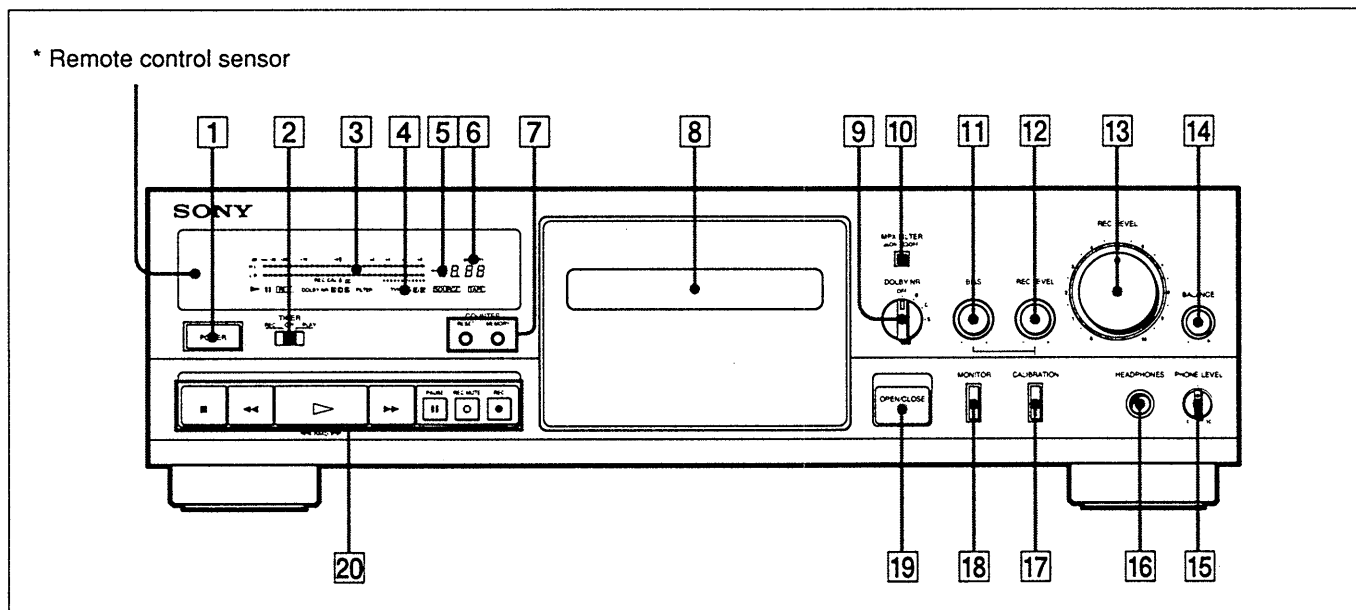
<u>Section</u>	<u>Title</u>	<u>Page</u>
<b>1. GENERAL</b>		
	Identifying the Parts .....	4
<b>2. DISASSEMBLY</b>		
2-1.	Mechanism Block .....	5
2-2.	Cassette Holder .....	5
2-3.	Ornamental Plate .....	6
2-4.	Capstan Motor/Flywheel (TC-K707ES, K711S).....	6
2-5.	Capstan Motor/Flywheel (TC-K611S) .....	7
2-6.	Reel and Assist Motors .....	8
<b>3. MECHANICAL ADJUSTMENTS</b> .....		9
<b>4. ELECTRICAL ADJUSTMENTS</b> .....		12
<b>5. DIAGRAMS</b>		
5-1.	Circuit Boards Location .....	16
5-2.	Printed Wiring Boards—Main Section— .....	17
5-3.	Schematic Diagram—Audio Section— .....	21
5-4.	Schematic Diagram—System Control Section—....	25
5-5.	Schematic Diagram—Dolby S Section— .....	29
5-6.	Printed Wiring Board—Dolby S Section— .....	31
5-7.	Semiconductor Lead Layouts .....	32
<b>6. EXPLODED VIEWS</b>		
6-1.	Front Panel Section .....	33
6-2.	Chassis Section.....	34
6-3.	Mechanism Section 1 (TCM-200V15: TC-K611S) ..	35
6-4.	Mechanism Section 2 (TCM-200V15: TC-K611S) ..	36
6-5.	Mechanism Section 3 (TCM-200V16: TC-K707ES) (TCM-200V17: TC-K711S) .....	37
6-6.	Mechanism Section 4 (TCM-200V16: TC-K707ES) (TCM-200V17: TC-K711S) .....	38
<b>7. ELECTRICAL PARTS LIST</b> .....		39

## SECTION 1 GENERAL

This section is extracted from instruction manual.

# Identifying the Parts

## Front Panel



For details, refer to the page number(s) indicated in parentheses.

- 1** POWER switch
- 2** TIMER switch (page 16)
- 3** Peak level meter (page 13)
- 4** Tape TYPE indicator
- 5** Linear counter (page 10)
- 6** MEMORY indicator
- 7** COUNTER buttons  
RESET button (page 10)  
MEMORY button (pages 9 and 10)
- 8** Cassette holder
- 9** DOLBY NR (noise reduction) switch (pages 7 and 11)
- 10** MPX FILTER button (page 13)
- 11** BIAS control (pages 14 and 15)
- 12** REC (recording) LEVEL control for calibration (pages 14 and 15)
- 13** REC (recording) LEVEL control (pages 11 and 13)
- 14** BALANCE control (page 11)
- 15** PHONE (headphones) LEVEL control (page 7)
- 16** HEADPHONES jack (stereo phone jack) (page 7)
- 17** CALIBRATION button (page 14)
- 18** MONITOR button (page 13)

- 19** OPEN/CLOSE button
- 20** Tape operation buttons
  - (stop) button
  - (rewind) (Multi-AMS\*\*) button
  - (play) button
  - (fast-forward) (Multi-AMS\*\*) button
  - PAUSE button
  - REC MUTE (record muting) button (page 16)
  - REC (recording) button

### \*Remote control sensor

You can remotely control this cassette deck with:

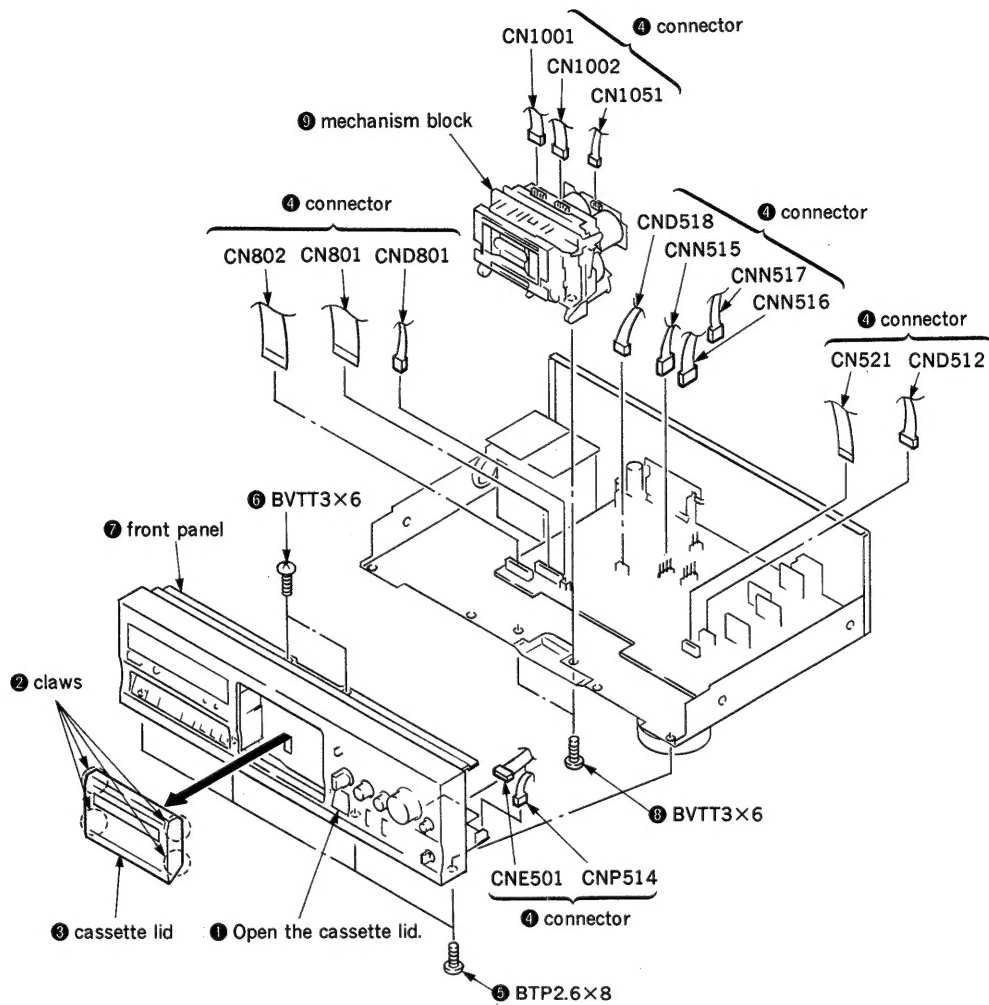
- A remote commander that came with a Sony amplifier or receiver if it has the mark and cassette deck control capability.
- An optional Sony remote commander with the mark and cassette deck control capability.

\*\*AMS is an abbreviation for Automatic Music Sensor.

## SECTION 2 DISASSEMBLY

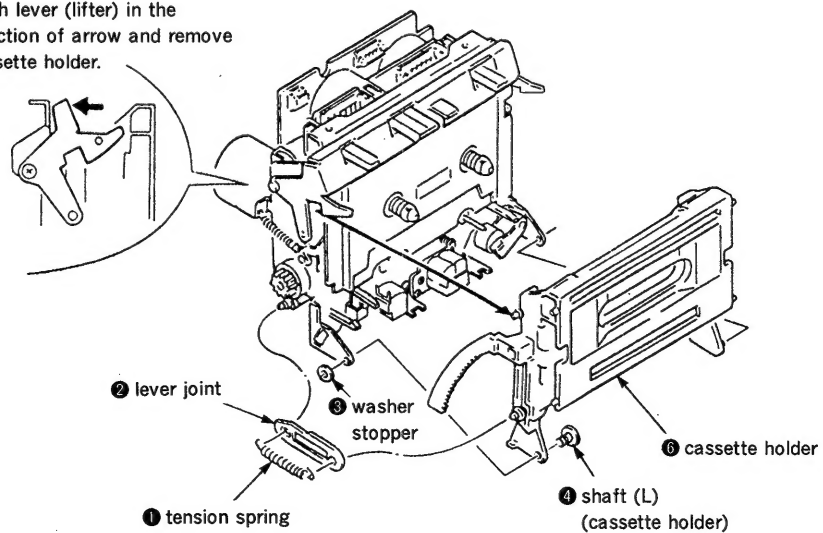
**Note:** Follow the disassembly procedure in the numerical order given.

### 2-1. MECHANISM BLOCK



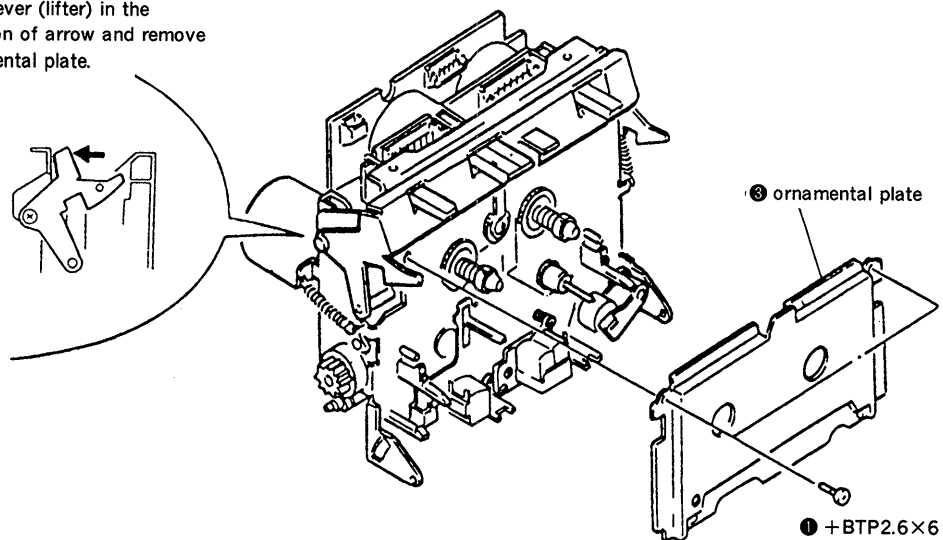
### 2-2. CASSETTE HOLDER

**5** Push lever (lifter) in the direction of arrow and remove cassette holder.

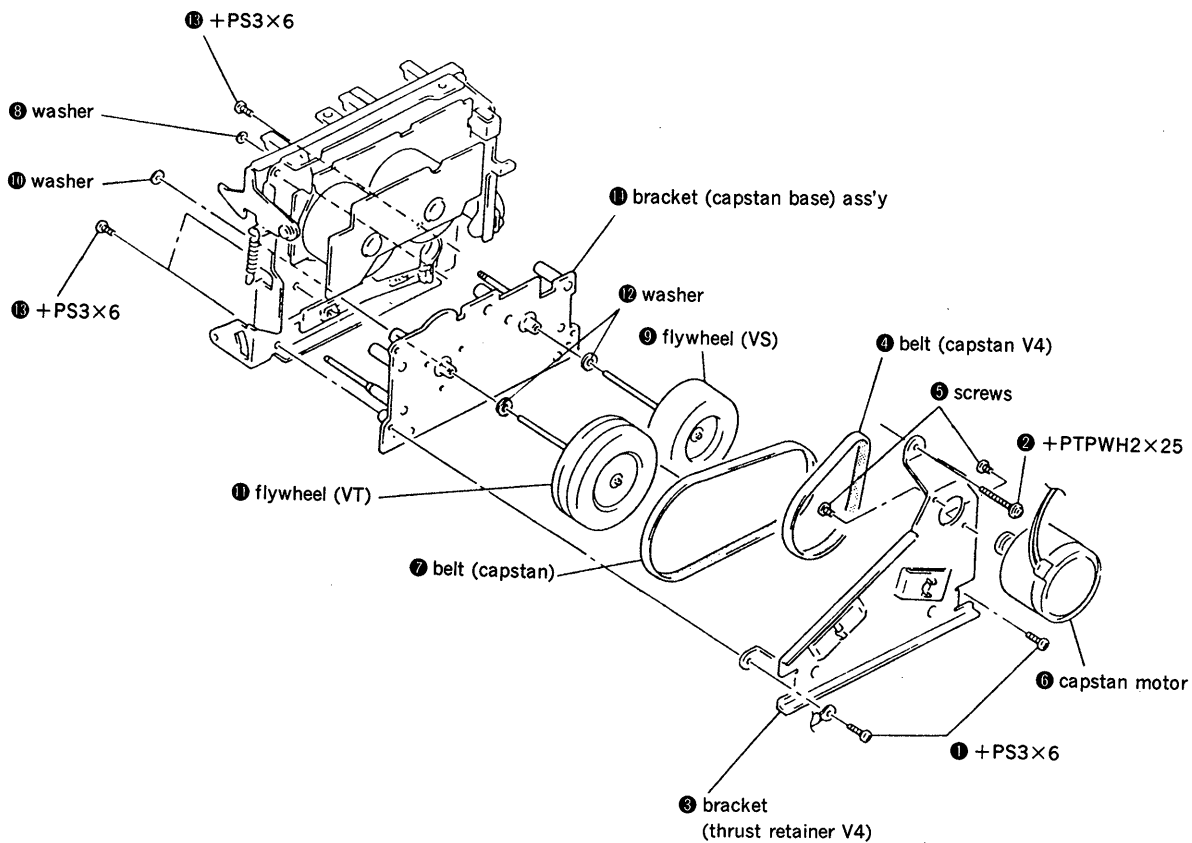


## 2-3. ORNAMENTAL PLATE

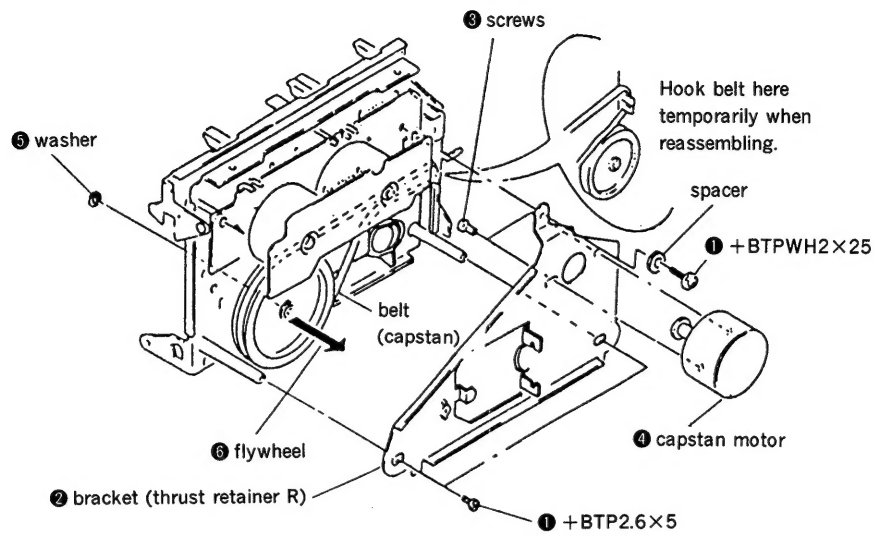
- ② Push lever (lifter) in the direction of arrow and remove ornamental plate.



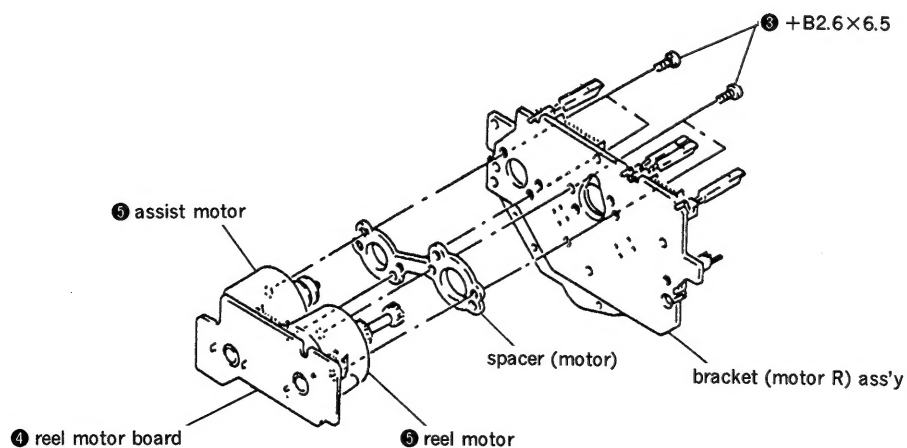
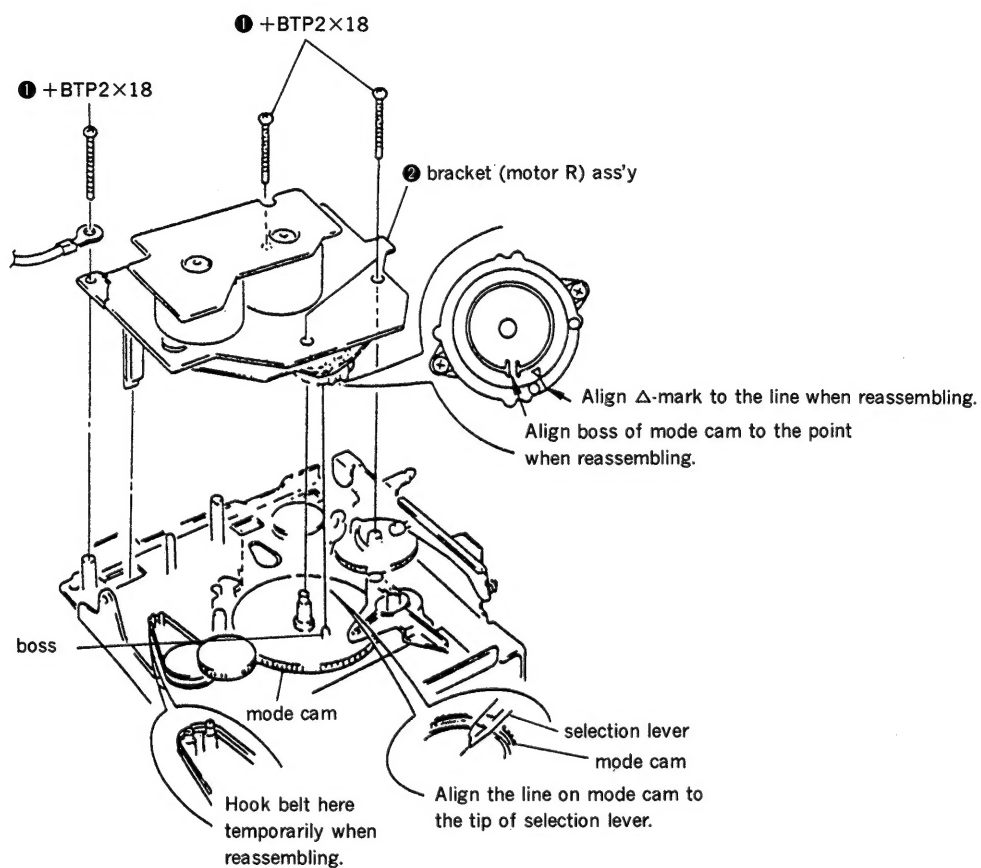
## 2-4. CAPSTAN MOTOR/FLYWHEEL (TC-K707ES/K711S)



## 2-5. CAPSTAN MOTOR/FLYWHEEL (TC-K611S)



## 2-6. REEL AND ASSIST MOTORS





## SECTION 3 MECHANICAL ADJUSTMENTS

### PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
 

record/playback head	pinch roller
erase head	rubber belts
capstan	idler
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.

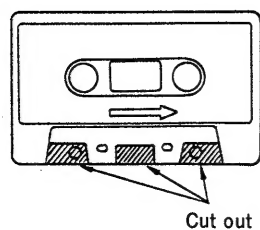
### Tape Path Adjustment

**Note:** When using the adjustment methods for other than replacement reasons, please do not tamper unnecessarily with the adjustment screws or the erase head because either the supply pinch roller guide or the record/playback head will be made the standard tape paths. Moreover, when it is necessary to adjust and replace two or more of any of the heads and/or pinch rollers, replace them one by one, completely taking out the first tape path, and then replacing the second one.

### Preparation :

1. Mirror cassette CQ009C 8-909-708-01  
(or CQ012C 8-909-708-02)

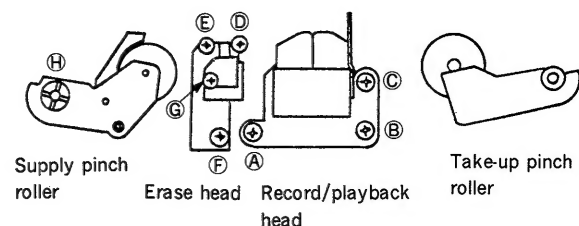
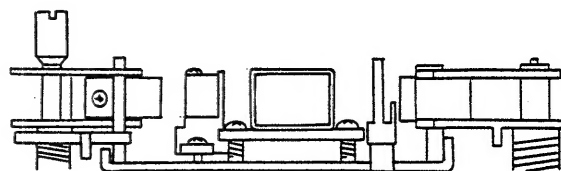
If one does not have this, cut out the sections of a 120-minute cassette shell as indicated below and use that cassette.



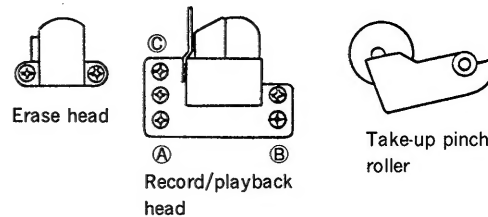
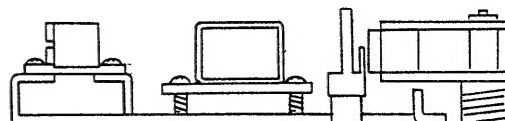
2. Phillips screwdriver (medium-size):  
For the head adjustment screws
- Blade-type screwdriver (large-size):  
For the supply pinch roller adjustment screws
3. Pen light
4. WS-48B (3kHz, 0 dB)
5. P-4-A100 (10kHz, -10dB)

**Adjustment Position :** As seen from the cassette, side (top) and MD as seen head on (bottom).

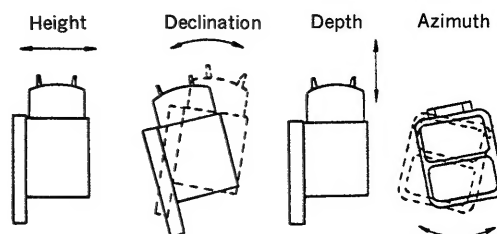
**TC-K707ES/K711S :**



**TC-K611S :**



**Definition of Terms :** The figures are of a record/playback head.



### Adjustment Method :

#### Supply Pinch Roller

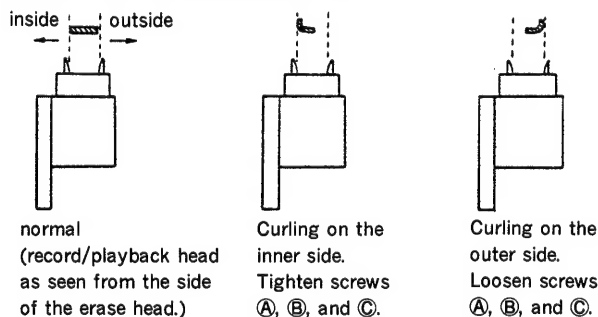
**Note :** Only perform this adjustment when the supply pinch roller is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. Check to see whether the tape is curling at the record/playback head guide or the pinch roller guide.  
If it is curling, remove the curl by adjusting the ④ tape curl adjustment screw. Then, check that the tape is running past the middle of the erase head.

#### Record/playback Head

**Note :** Only perform this adjustment when the record/playback head is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. **(Height Adjustment)** Check to see if the tape is curling at the tape guide of the head. If it is curling, tighten screws ①, ②, and ③, respectively by the same angle, moving the head so that it remains at the same angle through out the procedure. If it curls on the bottom side of the mirror cassette (actually the inner side), tighten all the screws equally ; but loosen them if the tape begins to curl on the top side (outer side).



3. **(Declination Adjustment)** While in the record/playback position, set the back tension to 0 (wind the supply reel with something thin like a pencil in a counterclockwise direction) and make sure there is no curling or shifting (shifting up/shifting down) at the guide of the record/playback head.

Because shifting can only occur due to a difference in the width of the tape and that of the tape guides (curling will otherwise occur), it is necessary to pay close attention since it can be easily overlooked.

When there is a shift, tighten screws ② and ③ equally and change the declination of the head. If the tape is shifting up, tighten the screws, and if it is shifting down, loosen them.

4. Repeat the adjustments in steps 2 and 3 and fine adjust the height and the declination.

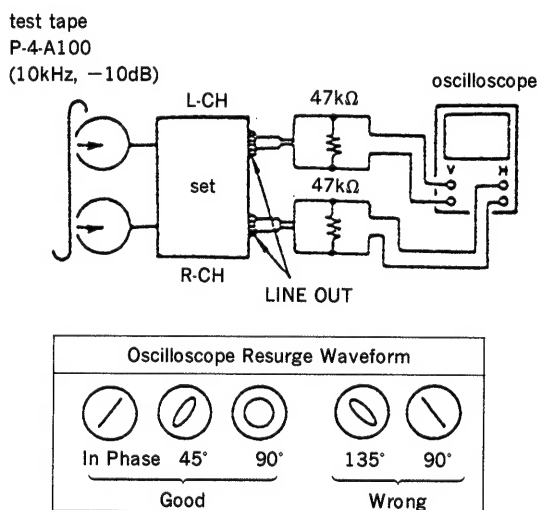
5. **(Preliminary Azimuth Adjustment)**

After demagnetizing and cleaning the adjustment head, playback WS-48B (3kHz, 0dB).

Turn screw ④ so that the reading on the level meter of the unit or that of the level meter connected to LINE OUT is maximized.

If the screw is turned at least half a revolution, repeat the adjustments from step 1.

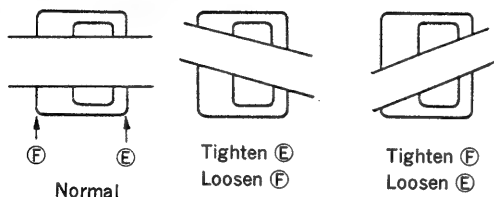
6. **(Tape Path Check)** Connect the oscilloscope to LINE OUT and play back P-4-A100 (10kHz, -10dB) to display a resurge waveform. After 20 seconds of record/playback (after the tension within the loop has been increased sufficiently), make sure the variation in the resurge is within  $\pm 90$  degrees (within  $\pm 45$  degrees is desired). If the declination and /or the height adjustment is not perfect. Repeat the adjustments from step 1.



## Erase Head

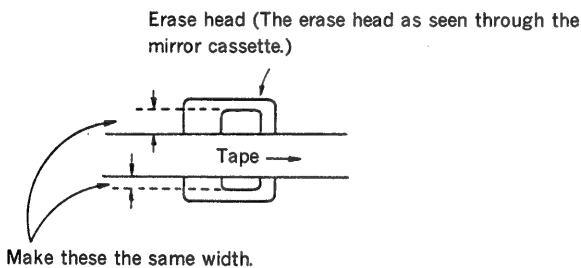
**Note:** Only perform this adjustment when the erase head is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. (**Azimuth Adjustment**) Adjust the azimuth of the erase head by adjusting screws ⑤ and ⑥ so that the tape runs as evenly as possible.

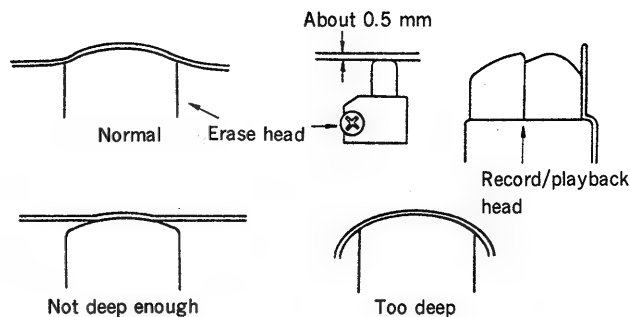


(The erase head as seen when erasing the mirror cassette.)

3. (**Height adjustment**) Turn screws ④, ⑤, and ⑥ all by the same angle so that the portions of the erase head visible at top and bottom are nearly of equal width. If the width at the top is greater, tighten the screws; if the width at the bottom is greater, loosen the screws.



4. (**Declination Adjustment**) Leaving it in the playback position, put the back tension to 0 and make certain the erase head part and supply pinch roller guide part do not shift. If there is a shift, turn the screw ⑦ and change the declination. Looking at it using the mirror cassette, if the tape shifts up, tighten the screw, and if it shifts down, loosen the screw.
5. Repeat the adjustments beginning with step 2 and fine adjust the height and declination. And make sure the tape does not curl up on the pinch roller guide or the guide part of the record/playback head.
6. (**Depth Adjustment**) In order to make the entire head play the tape smoothly, and to make sure the depth of the erase head is neither too shallow nor too deep, loosen screw ③ a bit.



## Check

1. Check to make sure that there are no curls or shifts through out the whole tape path and that the tape runs smoothly.
2. Reapply the locking compound to the adjusted screws. (The locking compound should only be applied to screw ③ after the azimuth has been adjusted.)

## Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	30—60g·cm (0.42—0.83 oz·inch)
FWD	CQ-102C	1—5g·cm (0.014—0.069 oz·inch): TC-K611S
Back tension		7—11 g·cm (0.097—0.153 oz·inch): TC-K707ES/K711S
FF, REW	CQ-201B	65—90g·cm (0.90—1.25 oz·inch)

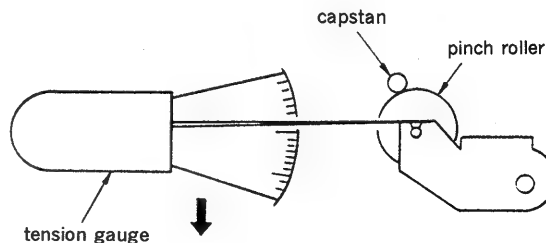
## Pinch Roller Pressing Force Measurement

Mode : playback

Hook needle of the tension gauge to the pinch roller shaft and push back pinch roller to detach it from capstan. Then, return it gradually to capstan and read the gauge when the pinch roller begins turning.

## Standard Limits :

210—310g (7.4—10.9 oz)	: TC-K611S
Tape-up side : 270—350g (9.5—12.3 oz)	: TC-K707ES/ K711S
Supply side : 180—280g (6.4—9.9 oz)	



## SECTION 4 ELECTRICAL ADJUSTMENTS

**Note:** The adjustment should be performed in the order given in the service manual. As a rule, adjustments about playback should be performed before those about recording.

The adjustments should be performed before for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF

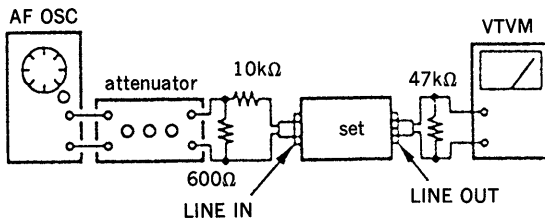
MPX FILTER switch: OFF

MONITOR switch: Tape

- Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

### —Record Mode—



**0dB=775mV**

### Standard Input Level

input terminal	LINE IN
source impedance	10kΩ
input level	0.5V (−3.8dB)

### Standard Output Level

output terminal	LINE OUT
load impedance	47kΩ
output level	0.5V (−3.8dB)

### Test Tape

Type	Signal	Used for
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

### Test Mode

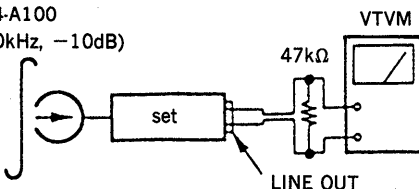
This set will get into test mode by shorting the pins of CNE702 (TEST) on MAIN board before turning the power on.

### Record/Playback Head Azimuth Adjustment

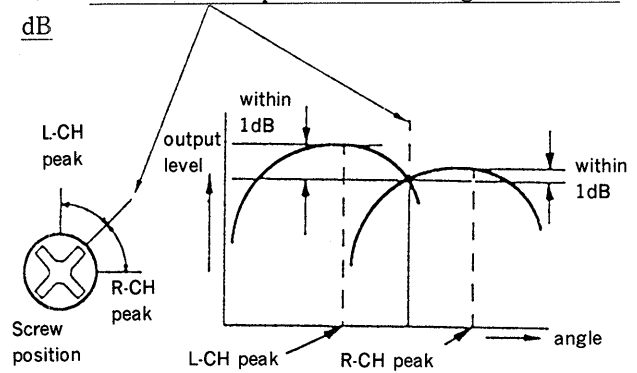
#### Procedure:

- Mode: FWD playback

Test tape  
P-4-A100  
(10kHz, −10dB)



- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB



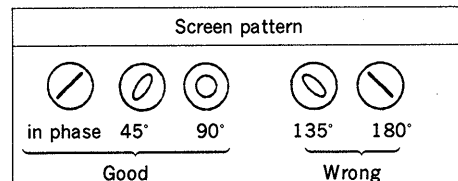
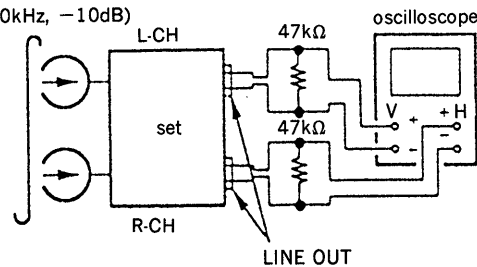
- Phase Check

Mode: playback

test tape

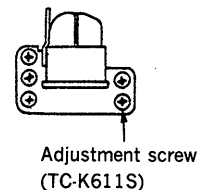
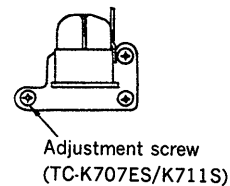
P-4-A100

(10kHz, −10dB)



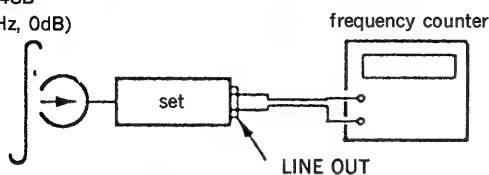
- After the adjustment, lock the screws with locking compound.

**Adjustment Location:** Record/Playback head

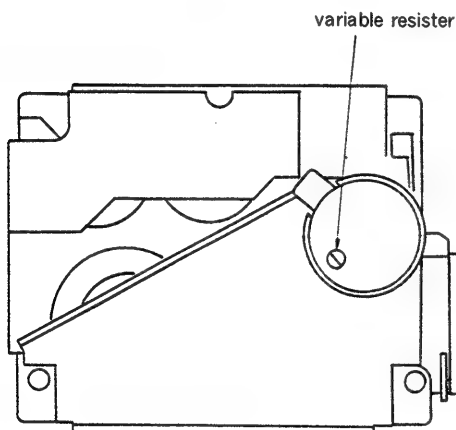


### Procedure :

test tape  
WS-48B  
(3kHz, 0dB)

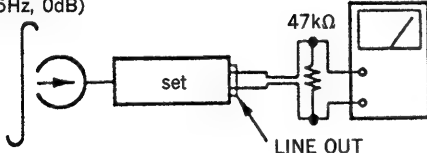


- Adjustment Location :** motor rear side (M1053)



### Procedure :

test tape  
P-4-L300  
(315Hz, 0dB)



**Adjustment Limits :**

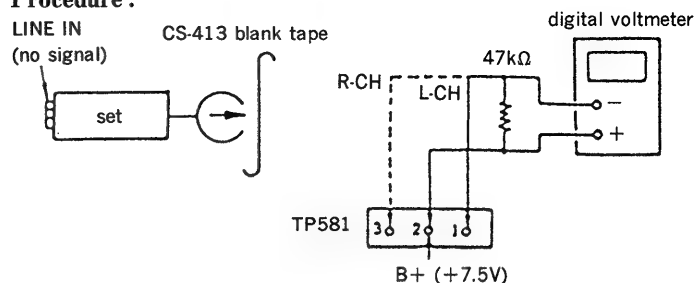
LINE OUT level:  $-8.2$  to  $-7.2\text{dB}$  ( $0.301$  to  $0.338\text{V}$ )

Level difference between channels: within 0.5dB

**Adjutment Location : MAIN board**

### Procedure :

(no signal)

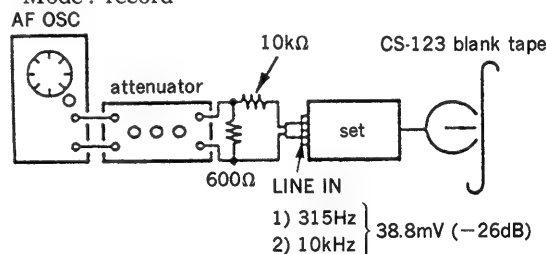


- |      | Mesurement Point | Adjustment Part | Value              |
|------|------------------|-----------------|--------------------|
| L-CH | ① and ②, TP581   | T181            | less than<br>200mV |
| R-CH | ③ and ② TP581    | T281            |                    |

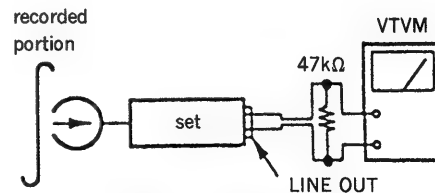
### Record Bias Adjustment

REC LEVEL control : Standard Record

1. Short the connector CNE702 (pins ① and ②). (test mode)
2. Mode : record



- ### 3. Mode : playback



- Adjustment Location :** MAIN board

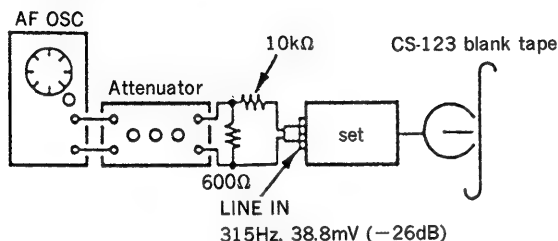
## Record Level Adjustment

### Setting :

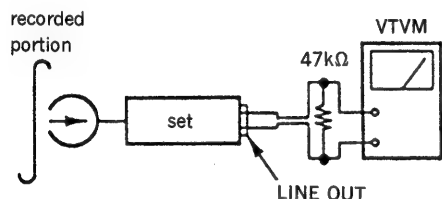
REC LEVEL control : Standard Record

### Procedure :

1. Short the connector CNE702 (pins ① and ②). (test mode)
2. Mode : record



3. Mode : playback



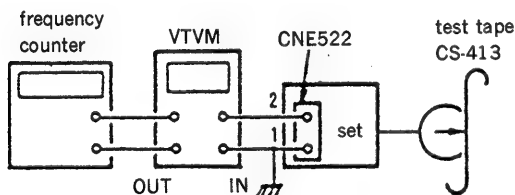
4. Playback the signal recorded in step 1.
5. Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV141 (L-CH) and RV241 (R-CH) repeat the step 1 and 2.
6. After adjustment, open the connector CNE702.

**Adjustment Limits :** -26.5 to -25.5dB (36.7 to 41.1mV)

**Adjustment Location :** MAIN board

## Erase Current Adjustment (TC-K707ES/K711S)

1. Mode : record



2. Adjust RV504 so that the reading on VTVM is 110mV (erase current=110mA.)
3. And then confirm that the reading on the frequency counter is 160kHz.

### Adjustment Limits :

Erase current : 105 to 110mA

Frequency : 160±6kHz

**Adjustment Location :** MAIN board

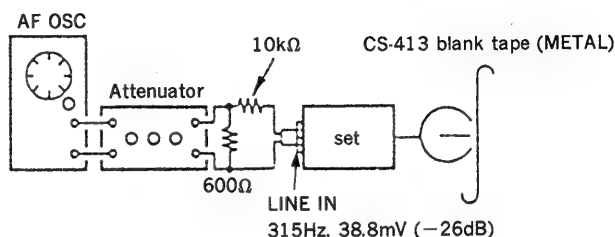
## Record EQ (IV) Adjustment

### Setting :

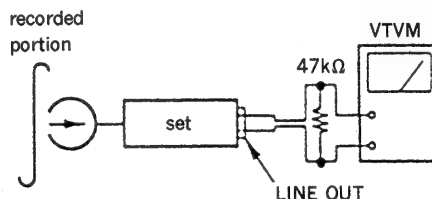
REC LEVEL control : Standard Record

### Procedure :

1. Short the connector CNE702 (pins ① and ②). (test mode)
2. Mode : record



3. Mode : playback



4. Playback the signal recorded in step 1.
5. Adjust RV142 (L-CH) or RV242 (R-CH) so that the reading on VTVM meets the within 1dB for difference between L-CH and R-CH.
6. Adjust RV508 so that the R-CH meet the specification.
7. After adjustment, open the connector CNE702.

### Adjustment Limits :

10kHz level difference against 315Hz reference.

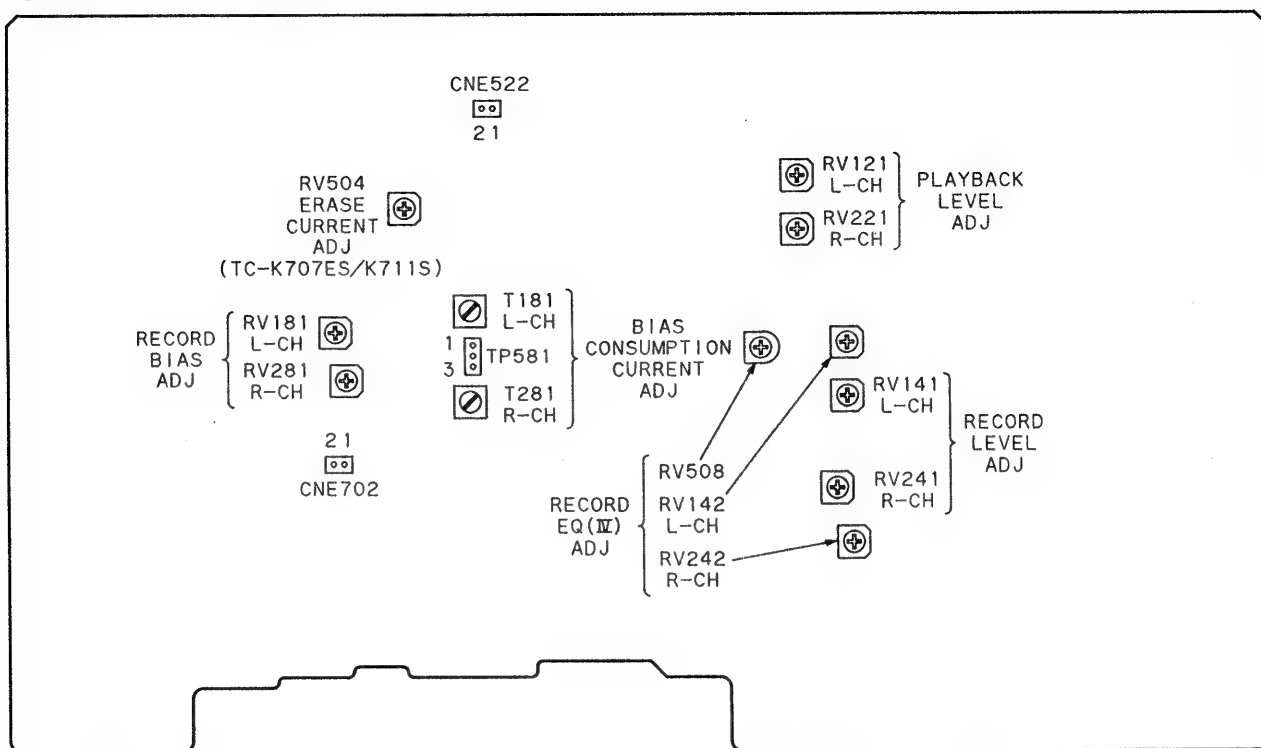
0±0.3dB : (TC-K707ES)

0±0.5dB : (TC-K611S/K711S)

**Adjustment Location :** MAIN board

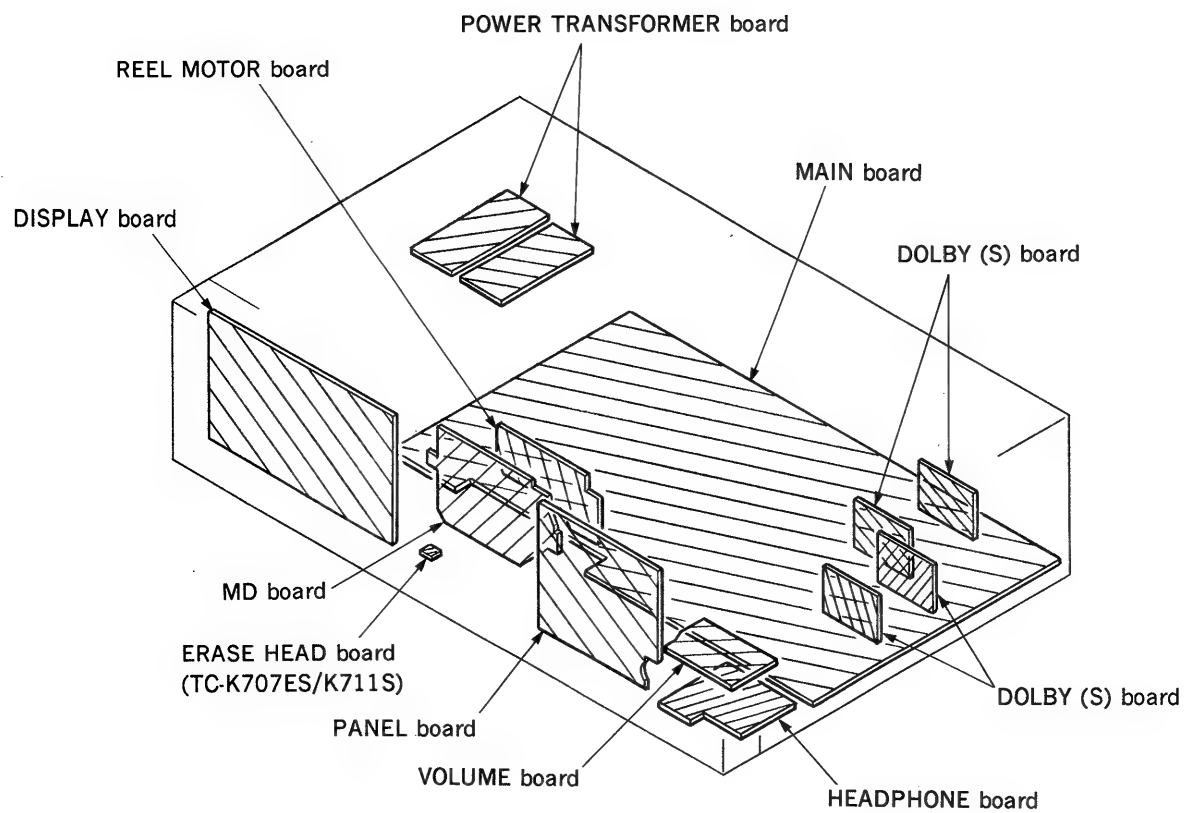
**Adjustment Location :**

**[ MAIN BOARD ] (COMPONENT SIDE)**



## SECTION 5 DIAGRAMS

### 5-1. CIRCUIT BOARDS LOCATION





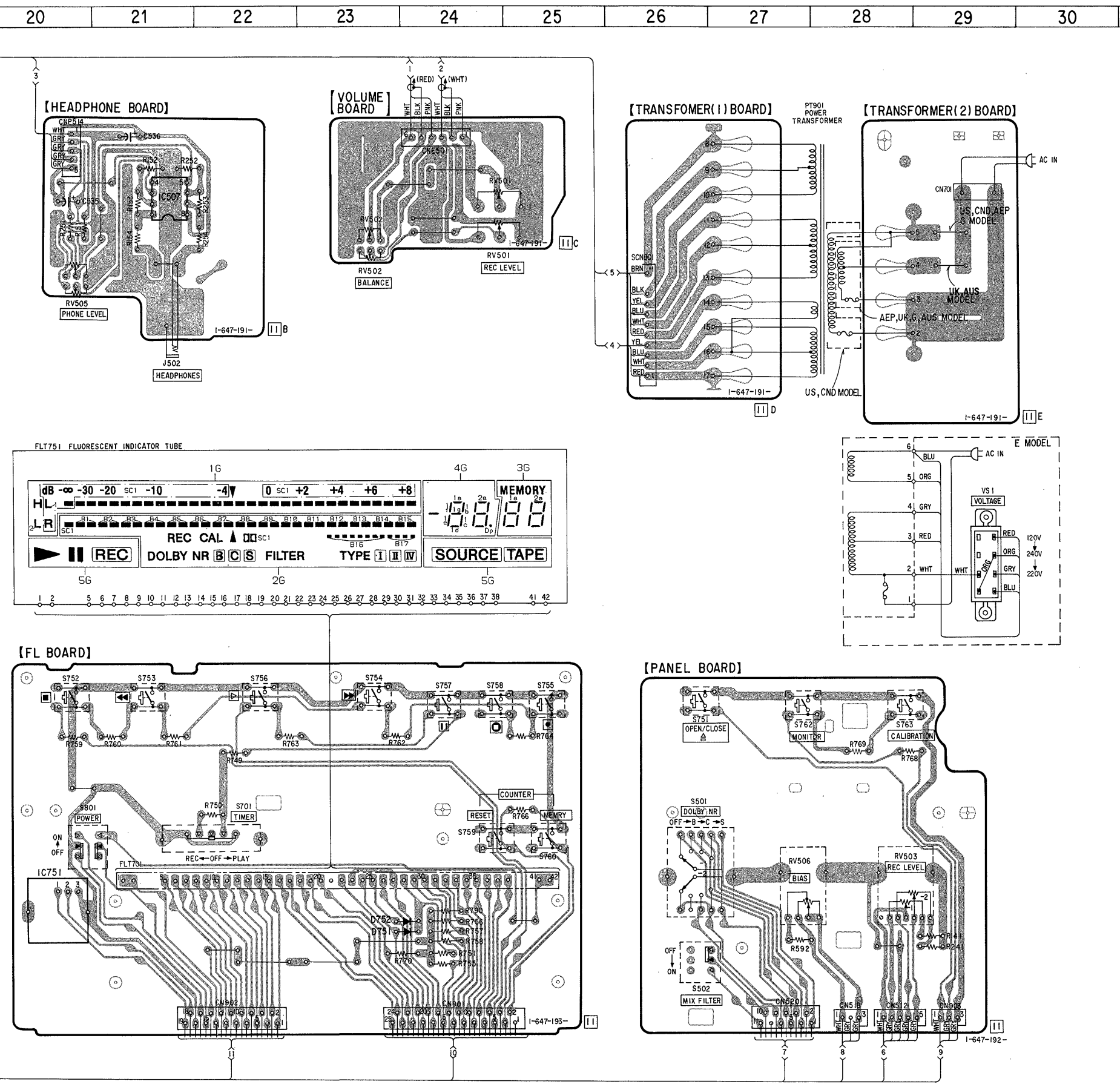
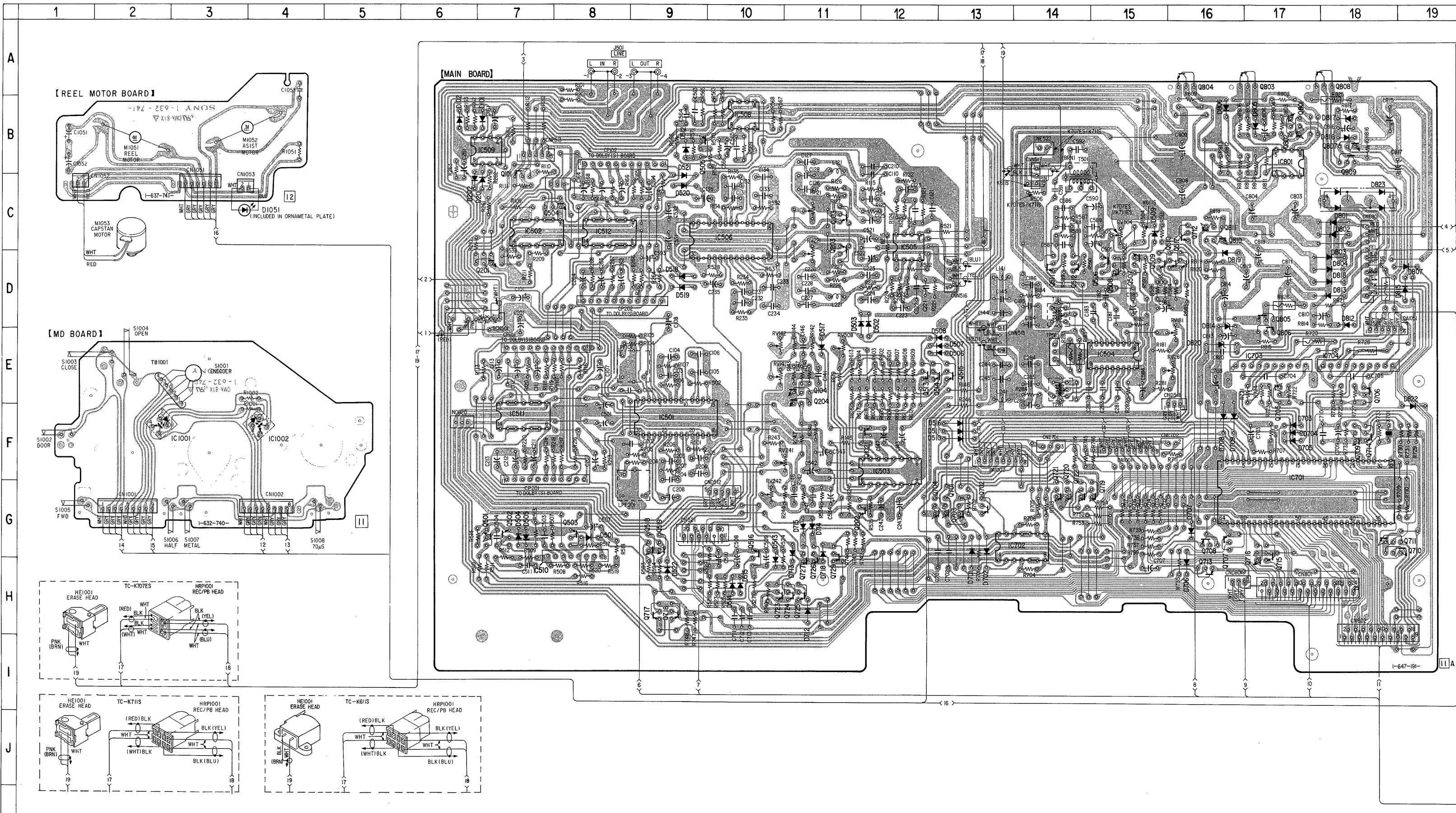
Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	B-7	D822	F-19	Q707	G-16
D102	B-6	D823	C-18	Q708	G-16
D201	C-7	D1051	C-4	Q709	F-18
D202	C-6			Q710	G-18
D501	G-8	IC501	F-9	Q711	G-18
D502	E-12	IC502	C-7	Q712	C-16
D503	E-11	IC503	F-12	Q713	H-16
D504	G-7	IC504	E-15	Q714	F-18
D505	G-7	IC505	C-12	Q715	G-17
D506	E-12	IC506	C-10	Q716	G-17
D507	E-12	IC507	B-21	Q717	H-9
D508	E-12	IC508	B-10	Q718	H-9
D509	C-15	IC509	B-7	Q719	G-14
D510	F-13	IC510	H-8	Q720	G-14
D511	F-13	IC511	F-7	Q721	G-14
D512	B-9	IC512	C-8	Q722	G-14
D513	H-10	IC701	G-17	Q723	H-10
D514	H-10	IC702	G-14	Q724	H-11
D515	H-10	IC703	E-17	Q725	H-11
D516	F-13	IC704	E-18	Q726	H-11
D517	E-11	IC751	F-20	Q727	H-11
D518	D-9	IC801	B-17	Q729	H-11
D519	D-9	IC1001	F-2	Q801	B-17
D520	C-9	IC1002	F-4	Q802	B-17
D521	C-9			Q803	A-16
D522	H-9	Q101	C-7	Q804	A-16
D701	G-13	Q102	F-12	Q805	D-17
D702	G-13	Q103	C-11	Q806	E-17
D703	F-17	Q104	E-11	Q807	B-18
D704	F-17	Q201	D-7	Q808	A-17
D705	F-17	Q202	G-11	Q809	B-18
D706	H-16	Q203	D-11	Q810	C-16
D707	G-16	Q204	E-11	Q811	C-16
D708	F-16	Q501	G-7		
D709	F-16	Q502	G-7		
D712	H-11	Q503	G-8		
D713	H-11	Q504	C-7		
D714	G-11	Q505	B-9		
D715	G-11	Q506	D-15		
D718	H-11	Q507	D-15		
D751	F-23	Q508	D-15		
D752	F-23	Q509	D-15		
D801	C-18	Q510	D-16		
D802	C-18	Q511	D-14		
D803	D-18	Q512	D-14		
D804	D-18	Q513	E-12		
D805	B-17	Q514	E-12		
D806	B-16	Q515	E-13		
D807	D-19	Q516	G-10		
D812	D-18	Q517	D-16		
D813	D-18	Q518	G-9		
D814	E-16	Q519	G-9		
D815	D-19	Q701	G-13		
D816	B-18	Q702	G-13		
D817	B-18	Q703	G-13		
D818	D-18	Q704	G-12		
D819	D-16	Q705	E-17		
D820	E-16	Q706	E-18		

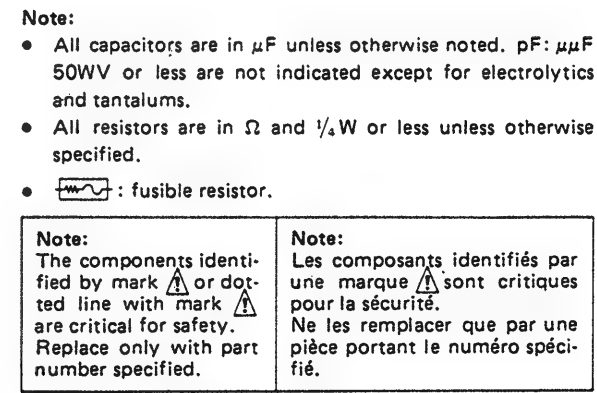
Note:

- : parts extracted from the component side.
- : Canadian model
- : German model
- : Australian model

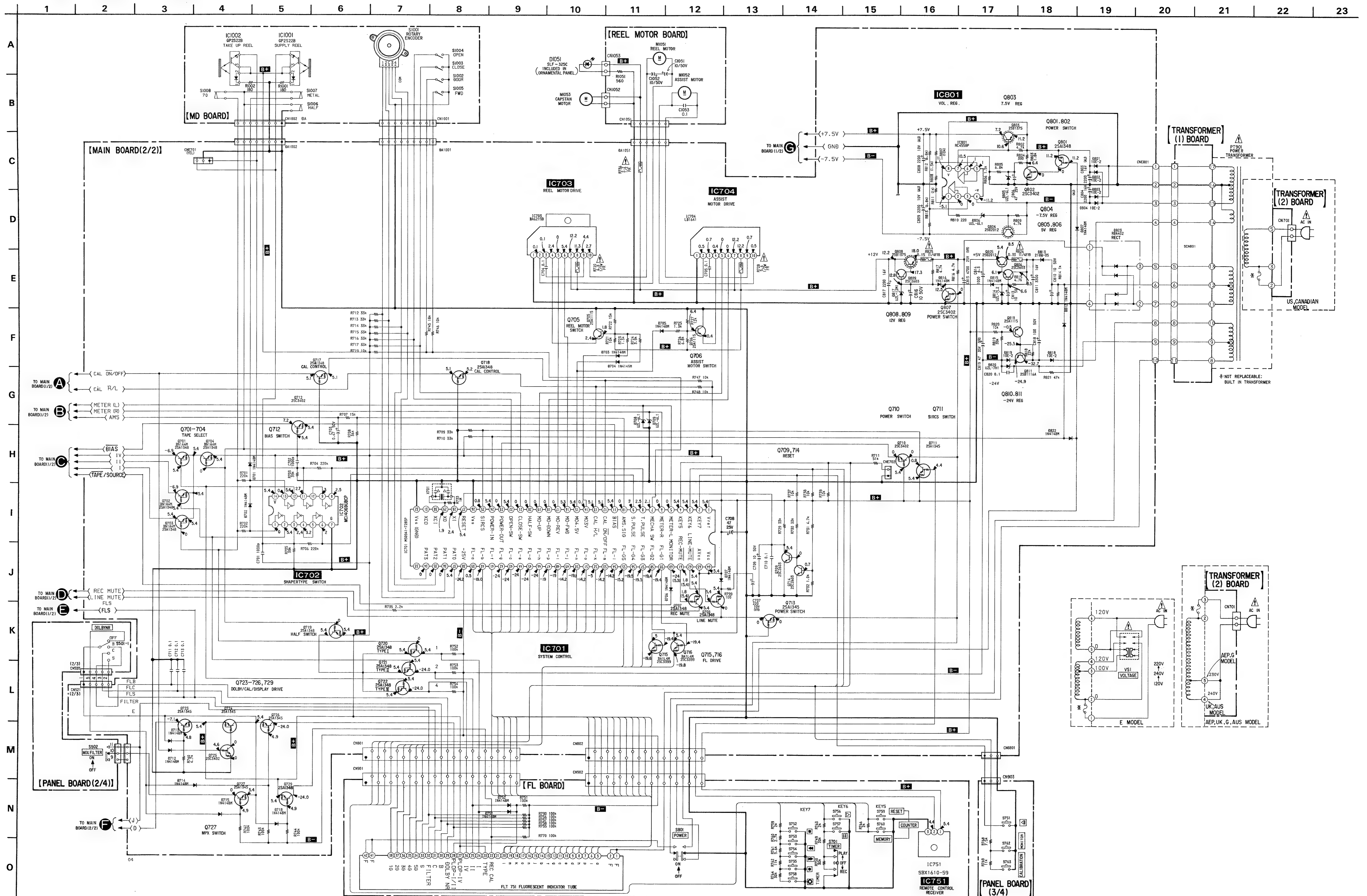
PRINTED WIRING BOARDS—MAIN SECTION— Refer to page 32 for Semiconductor Lead Layouts.





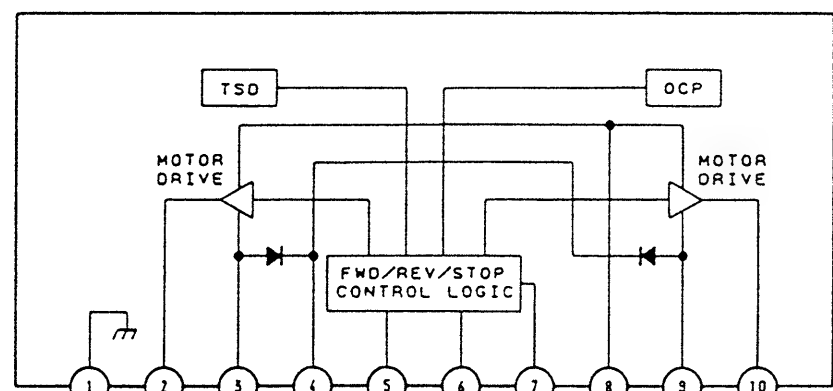




#### 5-4. SCHEMATIC DIAGRAM—SYSTEM CONTROL SECTION—






- IC Block Diagram


IC703	BA6219B
IC704	LB1641



- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} = \mu\text{F} \times 10^{-6}$   
50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
  -  : internal component.
  -  : fusible resistor.

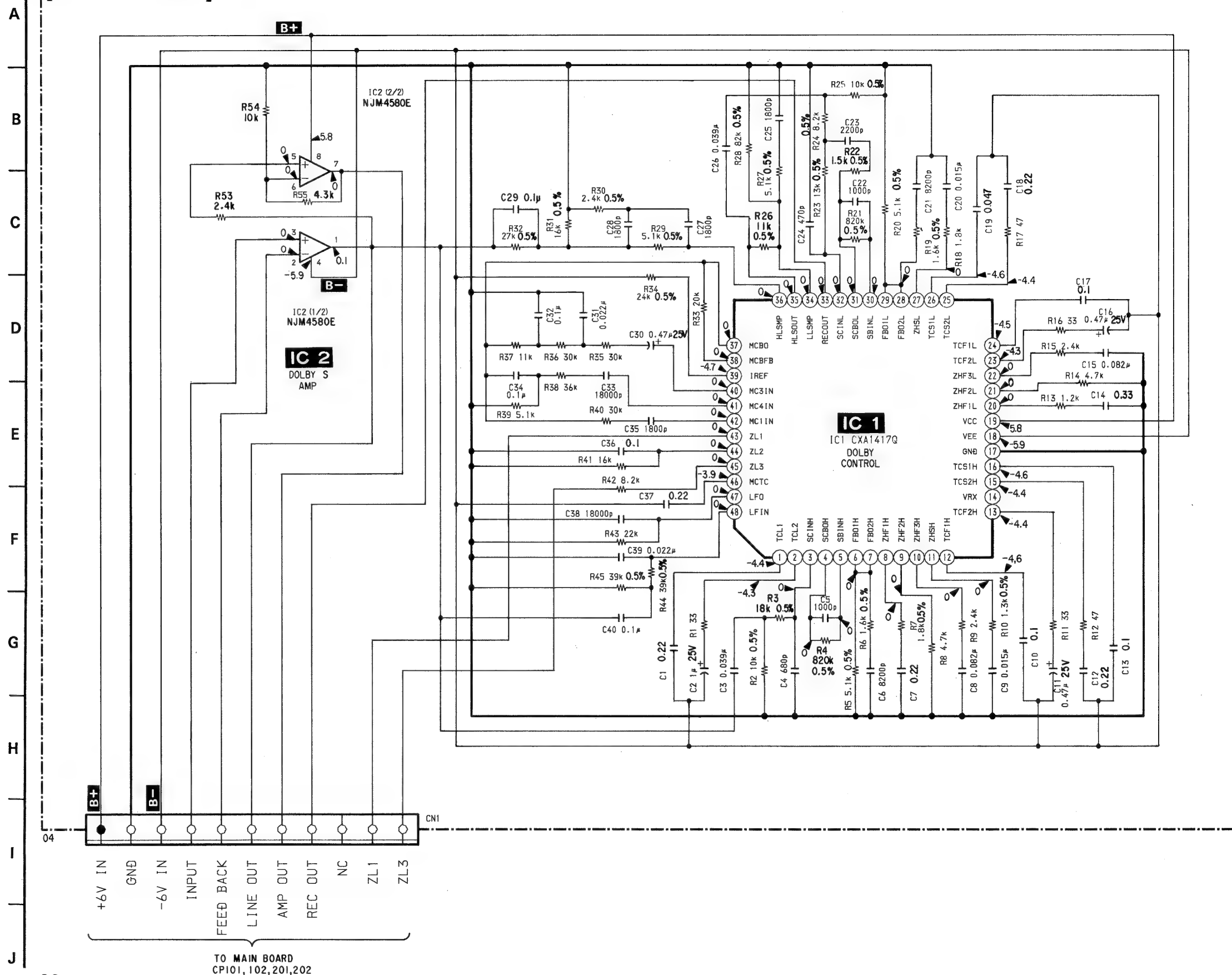
- |  |  |
|--|--|
| <p><b>Note:</b><br/>The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.</p> | <p><b>Note:</b><br/>Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p> |
|--|--|

- Voltage is dc with respect to ground under no-signal conditions.  
no mark : PB  
( ): REC
- Voltages are taken with a VOM (Input Impedance 10M  $\Omega$ ).  
Voltage variations may be noted due to normal production tolerances.
- G : German model
- AUS: Australian model

- Note:**  
Les composants identifiés par une marque  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

# 5-5. SCHEMATIC DIAGRAM—DOLBY S SECTION—

## [DOLBY(S) BOARD]



### Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{pF}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- Voltage is dc with respect to ground under no-signal conditions. no mark : PB
- Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.

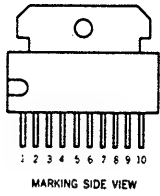
TO MAIN BOARD  
CP101, 102, 201, 202



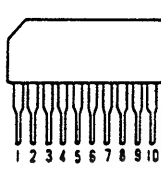


## 5-7. SEMICONDUCTOR LEAD LAYOUTS

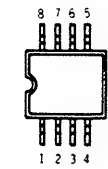
**BA6219B**



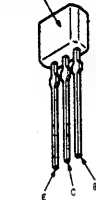
**LB1641**



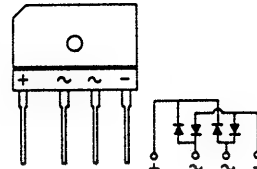
**NJM4580E-D**



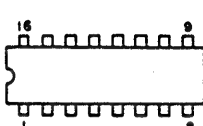
**2SA1175-HFE**  
**2SD1020-HFE**  
**2SD2144S-UVW**  
letter side



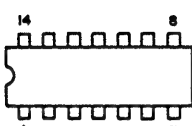
**RBA-402**



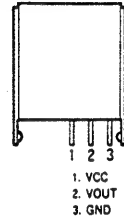
**CXA1198AP**



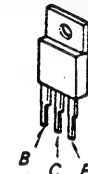
**MC14066BCP**



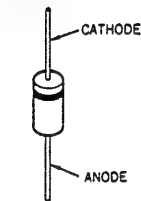
**SBX1610-59**



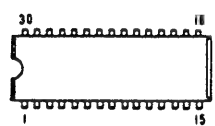
**2SB1094-LK**  
**2SD2012**



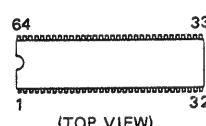
**1N4148M**  
**10E2N**



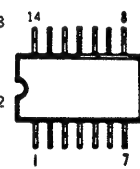
**CXA1331S**



**M50941-728SP**



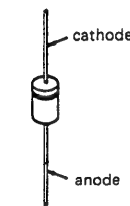
**TC4069UBP**



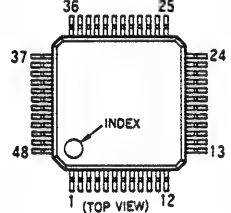
**2SB1116A-L**  
**2SC945-P**



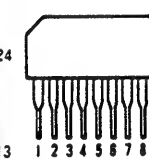
**21DQ05**



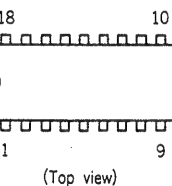
**CXA14170**



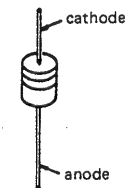
**M5218AL**



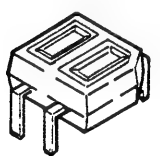
**μPC1297CA**



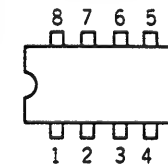
**HZS6A1L**  
**SLF325C**  
**UZL-7H1**  
**UZL-7L2**  
**UZL-12M1**  
**1SS202-1**



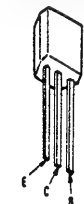
**GP2S22B**



**M5218AP**  
**μPC4558C**  
**μPC4570C-1**



**DTA114ES**  
**DTA144ES**  
**DTC114ES**  
**DTC143TS**  
**DTC144ES**  
**2SC2603-EF**



## SECTION 6 EXPLODED VIEWS

### NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- -XX and -X mean standardized parts, so they may have some difference from the original one.

### Color Indication of Appearance Parts

Example :

KNOB, BALANCE (WHITE)... (RED)

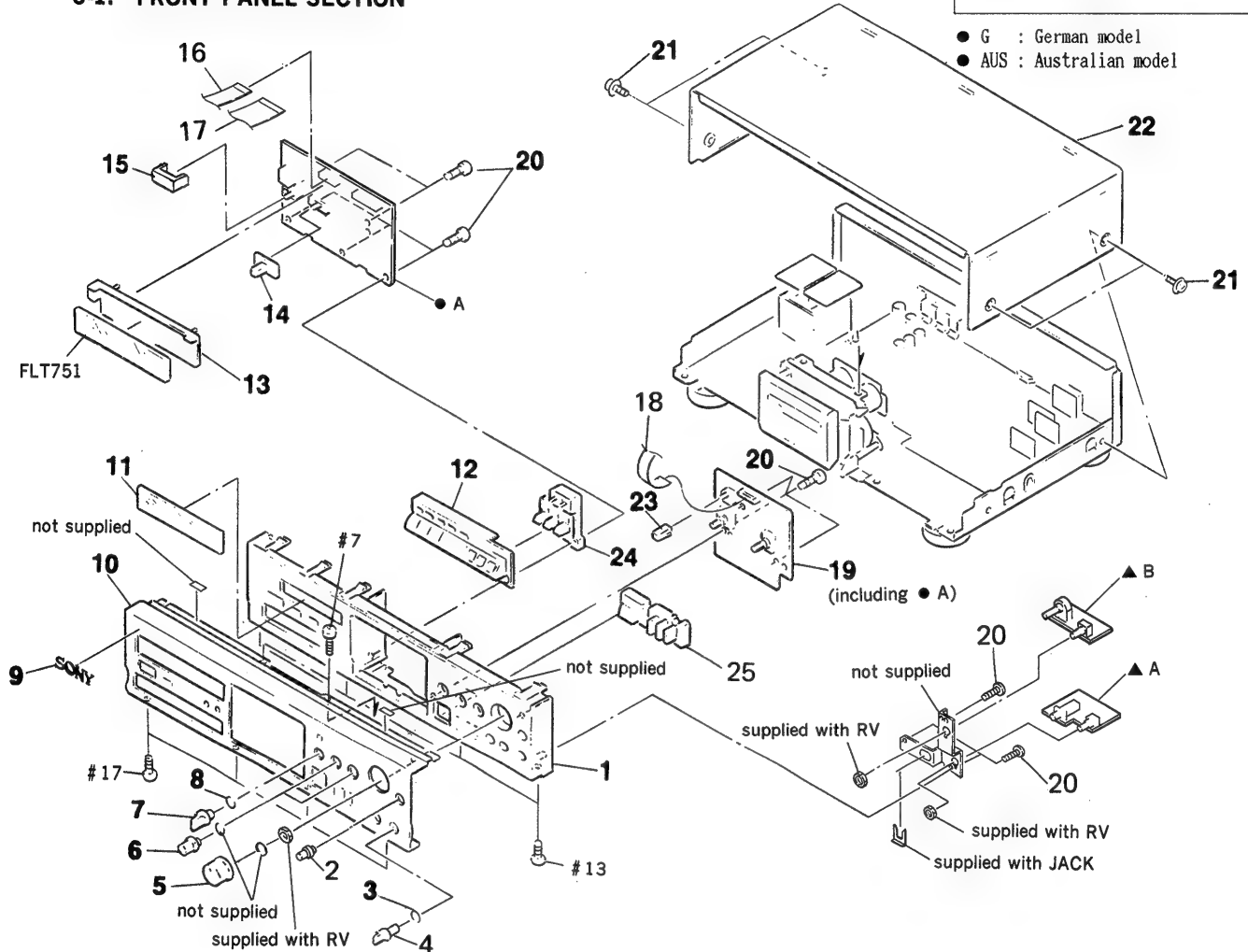
↑                      ↑  
Parts Color    Cabinet's Color

- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

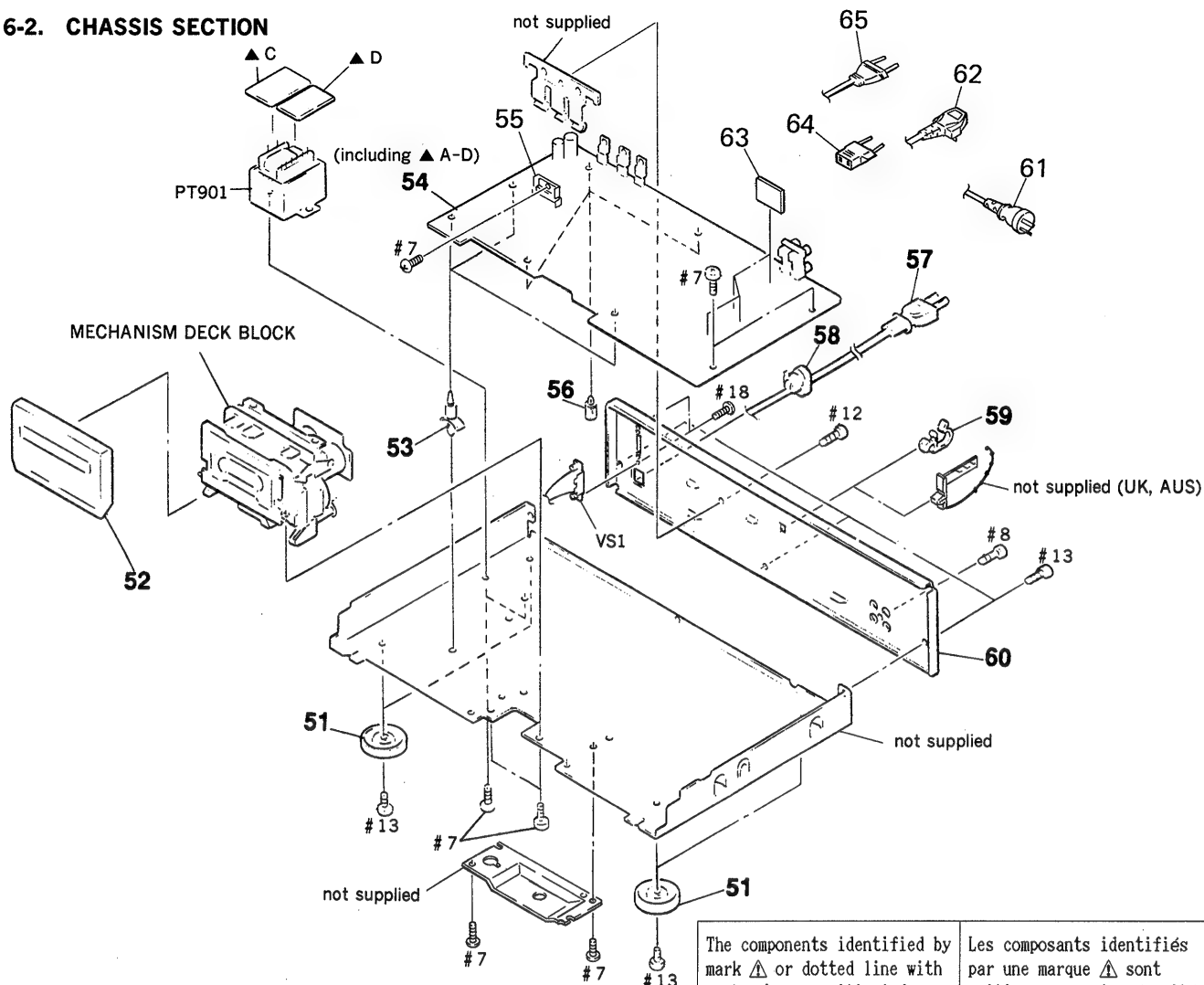
### 6-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	3-386-253-01	PANEL (BASE)	
2	3-370-003-01	KNOB (BAL)	
3	3-370-186-01	SPRING (SWPA), RING	
4	3-350-495-01	KNOB (VOL)	
5	3-367-438-11	KNOB (REC)	
6	X-3365-387-1	KNOB (BAL) ASSY (B)	
7	4-908-097-21	KNOB	
8	3-350-440-01	SPRING	
9	4-942-568-01	EMBLEM (NO. 5), SONY	
10	3-386-251-31	PANEL, FRONT (K707ES:US, Canadian)	
10	3-386-251-41	PANEL, FRONT (K707ES:E)	
10	3-386-251-51	PANEL, FRONT (K711S)	
10	3-386-251-61	PANEL, FRONT (K611S:US, Canadian)	
10	3-386-251-71	PANEL, FRONT (K611S:AEP, UK, G, AUS)	
10	3-386-251-81	PANEL, FRONT (K707ES:AUS)	
11	3-386-243-11	WINDOW (M)	

Ref. No.	Part No.	Description	Remark
12	3-386-247-01	BUTTON (FW)	
* 13	3-386-245-01	HOLDER (FL)	
14	4-922-518-01	KNOB (TIMER)	
15	3-354-932-01	BUTTON (POWER)	
16	1-690-893-11	WIRE (FLAT TYPE) (19 CORE)	
17	1-751-258-11	WIRE (FLAT TYPE) (25 CORE)	
18	1-534-517-00	WIRE, FLAT TYPE (11 CORE)	
* 19	A-2006-964-A	PANEL BOARD, COMPLETE	
20	4-951-620-01	SCREW (2.6X8), +BVTP	
21	3-704-366-01	SCREW (CASE) (M3X8)	
22	3-332-578-61	CASE	
23	3-380-952-01	BUTTON	
24	3-386-248-01	BUTTON (RE)	
25	3-386-249-01	BUTTON (EJ)	
FLT751	1-517-163-11	INDICATOR TUBE, FLUORESCENT	

## 6-2. CHASSIS SECTION



The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

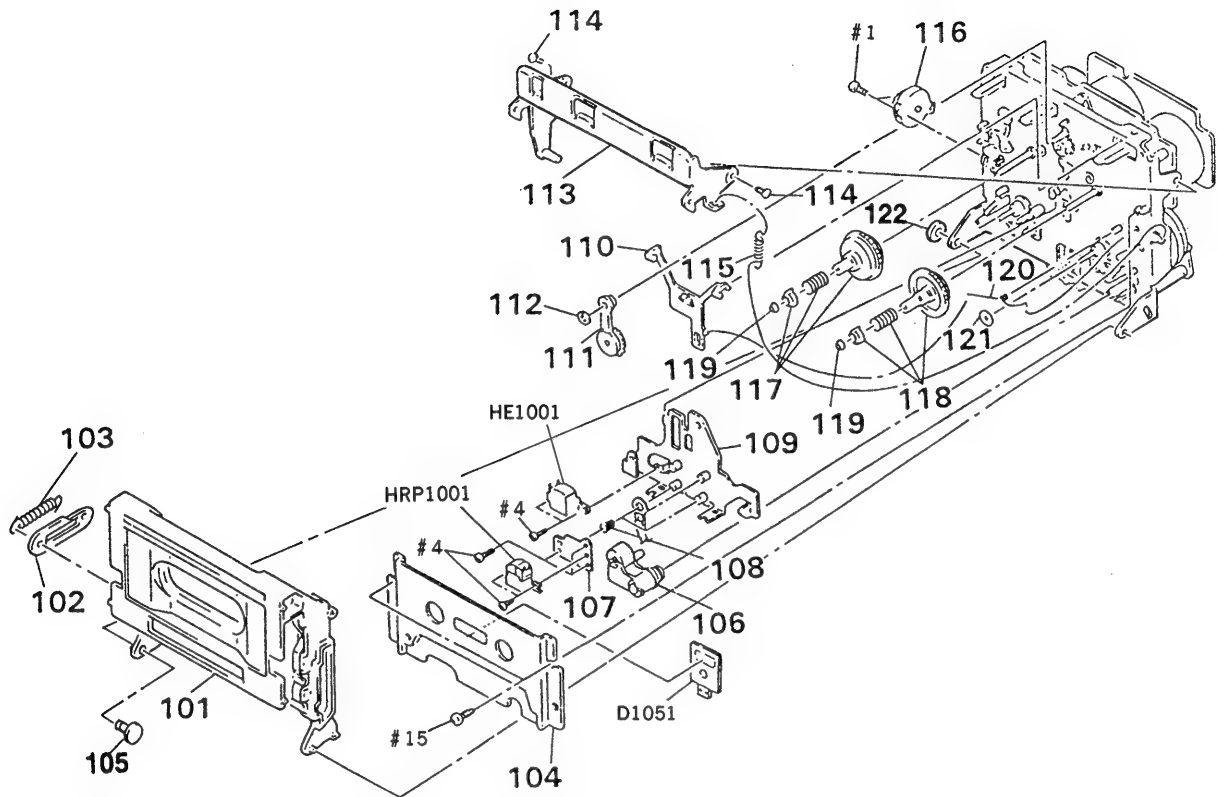
Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
51	4-943-148-32	FOOT (F58175SW) (K611S:US, Canadian)	
51	4-943-148-42	FOOT (F58175SW) (K707ES/K611S:AEP, UK, G, AUS)	
52	X-3366-167-1	LID ASSY, CASSETTE (K707ES:US, Canadian)	
52	X-3366-168-1	LID ASSY, CASSETTE (K711S)	
52	X-3366-169-1	LID ASSY, CASSETTE (K611S)	
52	X-3366-170-1	LID ASSY, CASSETTE (K707ES:E, AUS)	
* 53	3-346-265-11	HOLDER, PC BOARD	
* 54	A-2006-961-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K707ES:US, Canadian)	
* 54	A-2006-962-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K711S)	
* 54	A-2006-963-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K611S:US, Canadian, AEP, G)	
* 54	A-2007-037-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K707ES:AUS)	
* 54	A-2007-038-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K611S:UK, AUS)	
* 54	A-2007-045-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K707ES:E)	
* 55	3-356-925-01	HEAT SINK	
* 56	3-669-610-00	SPACER	

Ref. No.	Part No.	Description	Remark
▲57	1-551-188-XX	CORD, POWER (E)	
▲57	1-558-945-21	CORD, POWER (POLAR SPT-1) (US, Canadian)	
* 58	3-703-244-00	BUSHING (2104), CORD (AEP, UK, G, AUS)	
* 58	3-703-571-11	BUSHING (S) (4516), CORD (US, Canadian, E)	
* 59	4-949-235-01	FOOK (EXCEPT K707ES:AUS, K611S:UK, AUS)	
* 60	3-386-254-01	PANEL, BACK (K707ES:US, Canadian)	
* 60	3-386-254-11	PANEL, BACK (K707ES:E)	
* 60	3-386-254-21	PANEL, BACK (K707ES:AUS)	
* 60	3-386-254-31	PANEL, BACK (K711S)	
* 60	3-386-255-01	PANEL, BACK (K611S:US, Canadian)	
* 60	3-386-255-11	PANEL, BACK (K611S:AEP, G)	
* 60	3-386-255-21	PANEL, BACK (K611S:UK, AUS)	
▲61	1-696-845-11	CORD, POWER (AUS)	
▲62	1-696-586-11	CORD, POWER (UK)	
* 63	A-2006-954-A	DOLBY (S) BOARD, COMPLETE	
▲64	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
▲65	1-575-651-21	CORD, POWER (AEP, G)	
▲PT901	1-423-475-11	TRANSFORMER, POWER (US, Canadian)	
▲PT901	1-423-476-11	TRANSFORMER, POWER (AEP, UK, G, AUS)	
▲PT901	1-423-533-11	TRANSFORMER, POWER (E)	
▲VS1	1-692-155-11	SELECTOR, POWER VOLTAGE (VOLTAGE) (E)	



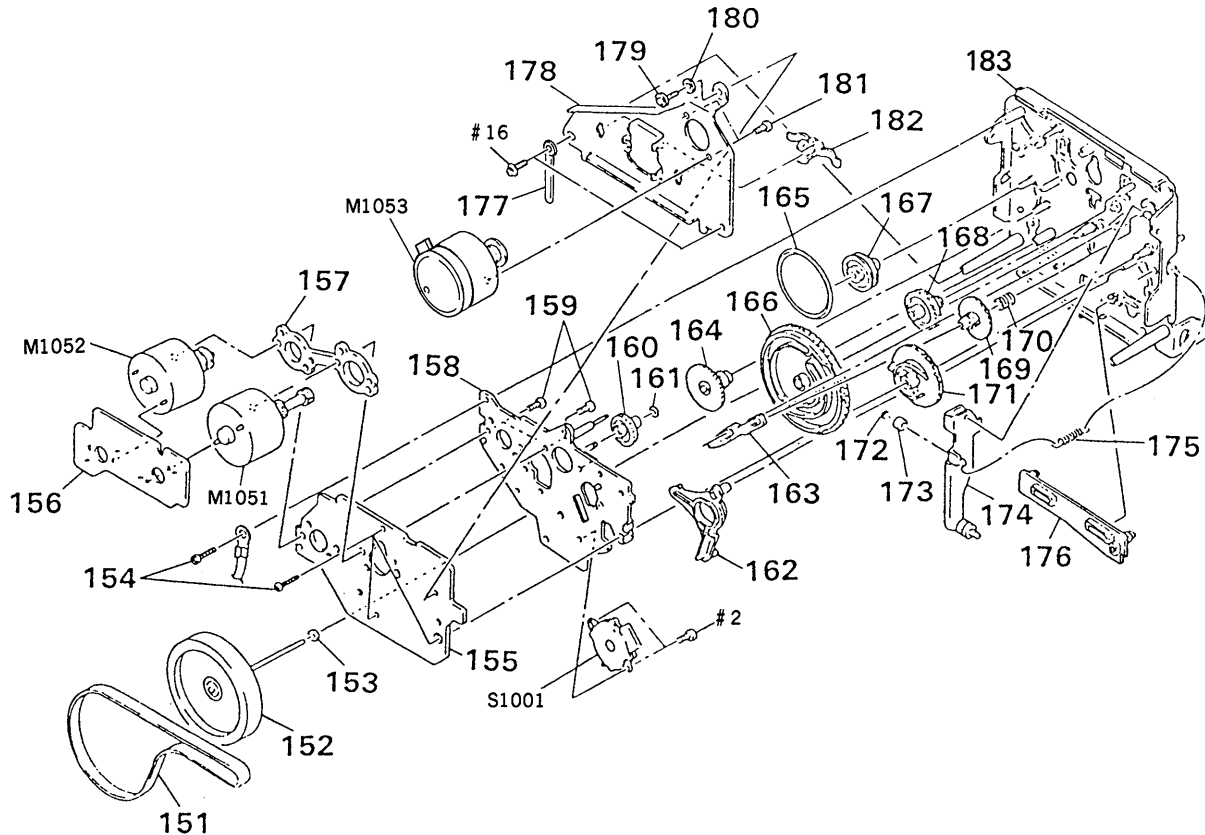
**6-3. MECHANISM SECTION 1**  
(TCM-200V15: TC-K611S)



Ref. No.	Part No.	Description	Remark
101	X-3365-299-1	HOLDER (CD-C) ASSY, CASSETTE	
* 102	3-356-717-01	LEVER (JOINT)	
103	3-356-626-01	SPRING, TENSION	
104	X-3356-613-1	PLATE ASSY, ORNAMENTAL	
105	3-378-341-01	SHAFT (L) (CASSETTE HOLDER)	
106	X-3356-649-1	LEVER (PINCH LEVER T) ASSY	
* 107	3-356-742-01	BRACKET (GUIDE R)	
108	3-356-659-01	SPRING (RPH), COMPRESSION	
109	X-3356-648-1	SLIDER (HEAD CHASSIS V2) ASSY	
110	3-356-614-01	SLIDER (BRAKE)	
111	X-3356-641-1	LEVER (FR2) ASSY	
112	3-669-465-11	WASHER (1.5), STOPPER	
* 113	X-3356-608-1	LEVER (LIFTER) ASSY	

Ref. No.	Part No.	Description	Remark
114	3-356-601-11	SCREW, STEP	
115	3-356-625-01	SPRING, TENSION	
116	3-712-786-01	DAMPER, OIL	
117	X-3356-628-1	GEAR (S) ASSY	
118	X-3356-627-1	GEAR (T) ASSY	
119	3-362-308-01	CAP (REEL)	
120	3-356-619-01	SPRING (B), TORSION	
121	3-356-713-01	WASHER	
122	3-558-708-21	WASHER, STOPPER	
D1051	8-719-980-85	DIODE SLF325C	
HE1001	1-543-673-11	HEAD, MAGNETIC (ERASE)	
HRP1001	1-543-733-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	

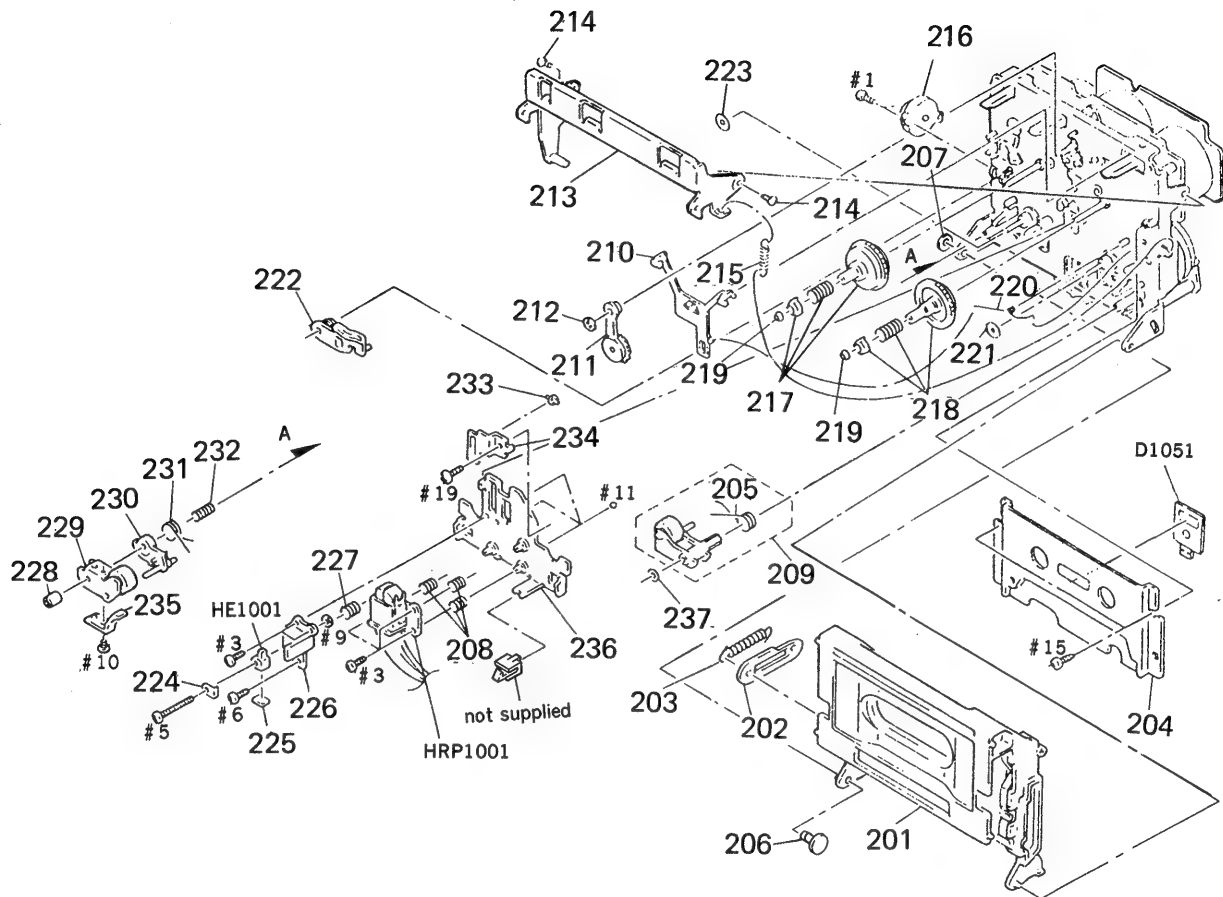
**6-4. MECHANISM SECTION 2**  
**(TCM-200V15: TC-K611S)**



Ref. No.	Part No.	Description	Remark
151	3-356-744-01	BELT (CAPSTAN V)	
152	X-3356-642-1	FLYWHEEL (R FWD) ASSY	
153	3-356-705-01	WASHER (CAPSTAN)	
154	3-355-801-01	SCREW (BTP 2X18)	
* 155	1-632-740-11	MD BOARD	
* 156	1-632-741-11	REEL MOTOR BOARD	
* 157	3-356-628-01	SPACER (MOTOR)	
* 158	X-3356-602-1	BRACKET (MOTOR R) ASSY	
159	3-363-804-01	SCREW (+P 2.6X6.5)	
160	3-356-702-01	GEAR (COMMUNICATION B)	
161	3-669-465-00	WASHER (1.5), STOPPER	
162	3-356-613-01	LEVER (MODE)	
163	3-356-617-01	LEVER (SELECTION)	
164	3-356-606-01	GEAR (MODE)	
165	3-356-603-01	BELT (MODE)	
166	3-356-747-01	GEAR (MODE CAM C)	
167	3-356-607-01	PULLEY (MODE)	
168	3-356-703-01	GEAR (COMMUNICATION C)	
169	3-356-609-01	GEAR (LOADING)	

Ref. No.	Part No.	Description	Remark
170	3-356-605-01	SPRING, COMPRESSION	
171	3-356-616-01	GEAR (LOADING CAM)	
172	3-558-708-11	WASHER, STOPPER	
173	3-356-630-01	ROLLER (LOADING)	
* 174	X-3356-606-1	LEVER (LOADING) ASSY	
175	3-372-919-01	SPRING, TENSION	
176	3-356-653-01	SLIDER (PAUSE)	
177	3-703-150-11	STOPPER, WIRING	
* 178	3-356-629-01	BRACKET (THRUST RETAINER R)	
179	3-356-707-01	SCREW (+PTPHW 2X25)	
* 180	3-356-718-01	SPACER (THRUST RETAINER R)	
181	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
182	3-575-321-00	RETAINER, THRUST, CAPSTAN	
183	X-3356-644-1	CHASSIS (V1) COMPLETE ASSY, MECH	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-646-1	MOTOR (CAPSTAN V1) ASSY	
S1001	1-466-238-11	ENCODER, ROTARY	

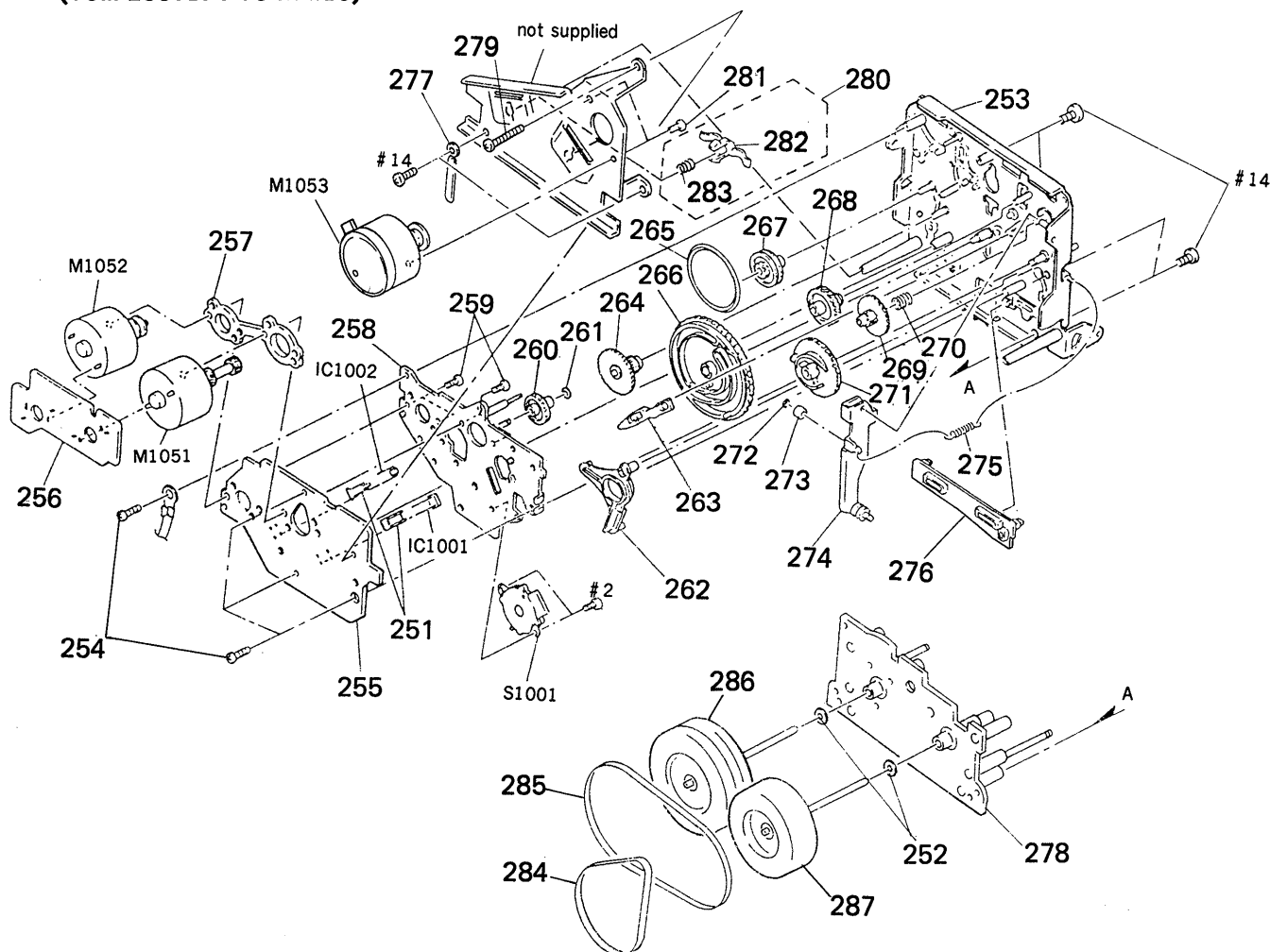
**6-5. MECHANISM SECTION 3**  
**(TCM-200V16: TC-K707ES)**  
**(TCM-200V17: TC-K711S)**



Ref. No.	Part No.	Description	Remark
201	X-3365-299-1	HOLDER (CD-C) ASSY, CASSETTE	
* 202	3-356-717-01	LEVER (JOINT)	
203	3-356-626-01	SPRING, TENSION	
204	X-3356-613-1	PLATE ASSY, ORNAMENTAL	
205	3-356-672-01	SPRING (PINCH LEVER T), TORSION	
206	3-378-341-01	SHAFT (L) (CASSETTE HOLDER)	
207	3-558-708-21	WASHER, STOPPER (K711S)	
208	3-356-659-01	SPRING (RPH), COMPRESSION	
209	X-3356-620-1	LEVER (PINCH LEVER T) ASSY	
210	3-356-614-01	SLIDER (BRAKE)	
211	X-3356-641-1	LEVER (FR2) ASSY	
212	3-669-465-11	WASHER (1.5), STOPPER	
* 213	X-3356-608-1	LEVER (LIFTER) ASSY	
214	3-356-601-11	SCREW, STEP	
215	3-356-625-01	SPRING, TENSION	
216	3-712-786-01	DAMPER, OIL	
217	X-3356-629-1	GEAR (S) ASSY	
218	X-3356-627-1	GEAR (T) ASSY	
219	3-362-308-01	CAP (REEL)	
220	3-356-619-01	SPRING (B), TORSION	
221	3-332-763-01	RING, OIL RESERVOIR	

Ref. No.	Part No.	Description	Remark
222	X-3356-623-1	LEVER (BT) ASSY	
223	3-356-713-01	WASHER	
224	3-318-433-01	SPRING	
* 225	1-608-268-00	ERASE HEAD BOARD	
* 226	3-576-977-00	BRACKET, E. HEAD	
227	3-564-121-00	SPRING, COMPRESSION	
228	3-356-652-01	NUT (PINCH LEVER S)	
229	X-3356-621-1	LEVER (PINCH LEVER S) ASSY	
230	3-356-660-01	LEVER (PS)	
231	3-356-661-01	SPRING (PINCH LEVER S), TORSION	
232	3-356-657-01	SPRING (PS), COMPRESSION	
233	3-367-775-01	ROLLER (HEAD CHASSIS)	
234	3-356-656-11	SPRING (HEAD PC BOARD), LEAF	
235	3-389-445-01	GUIDE (SL), TAPE	
* 236	X-3362-861-1	SLIDER (HEAD CHASSIS V4) ASSY	
237	3-669-596-00	WASHER (2.3), STOPPER	
D1051	8-719-980-85	DIODE SLF325C	
HE1001	1-543-836-11	HEAD, MAGNETIC (ERASE)	
HRP1001	1-543-834-11	HEAD, MAGNETIC (REC/PB) (K711S)	
HRP1001	1-543-835-11	HEAD, MAGNETIC (REC PB) (K707ES)	

**6-6. MECHANISM SECTION 4**  
**(TCM-200V16: TC-K707ES)**  
**(TCM-200V17: TC-K711S)**



Ref. No.	Part No.	Description	Remark
251	3-356-631-01	HOLDER (SENSOR)	
252	3-356-705-31	WASHER (CAPSTAN)	
* 253	X-3362-862-1	CHASSIS (V4) ASSY, MECHANICAL	
254	3-355-801-01	SCREW (BTP 2X18)	
* 255	1-632-740-11	MD BOARD	
* 256	1-632-741-11	REEL MOTOR BOARD	
* 257	3-356-628-01	SPACER (MOTOR)	
* 258	X-3356-616-1	BRACKET (MOTOR D) ASSY	
259	3-363-804-01	SCREW (+P 2.6X6.5)	
260	3-356-702-01	GEAR (COMMUNICATION B)	
261	3-669-465-00	WASHER (1.5), STOPPER	
262	3-356-613-01	LEVER (MODE)	
263	3-356-617-01	LEVER (SELECTION)	
264	3-356-606-01	GEAR (MODE)	
265	3-356-603-01	BELT (MODE)	
266	3-356-747-01	GEAR (MODE CAM C)	
267	3-356-607-01	PULLEY (MODE)	
268	3-356-703-01	GEAR (COMMUNICATION C)	
269	3-356-609-01	GEAR (LOADING)	
270	3-356-605-01	SPRING, COMPRESSION	
271	3-356-616-01	GEAR (LOADING CAM)	
272	3-558-708-11	WASHER, STOPPER	

Ref. No.	Part No.	Description	Remark
273	3-356-630-01	ROLLER (LOADING)	
* 274	X-3356-606-1	LEVER (LOADING) ASSY	
275	3-372-919-01	SPRING, TENSION	
276	3-356-653-01	SLIDER (PAUSE)	
277	3-703-150-11	STOPPER, WIRING	
* 278	X-3362-865-1	BRACKET (CAPSTAN BASE) ASSY	
279	3-356-707-01	SCREW (+PTPHW 2X25)	
280	X-3365-071-1	RETAINER (V4) ASSY, THRUST	
281	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
282	3-575-321-00	RETAINER, THRUST, CAPSTAN	
283	3-379-310-01	SPRING, COMPRESSION	
284	3-367-774-01	BELT (CAPSTAN V4)	
285	3-364-600-01	BELT (CAPSTAN)	
286	X-3362-863-1	FLYWHEEL (VT) ASSY	
287	X-3362-864-1	FLYWHEEL (VS) ASSY	
IC1001	8-749-920-97	DIODE GP2SSSB	
IC1002	8-749-920-97	DIODE GP2S22B	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-635-1	MOTOR (CAPSTAN R2) ASSY	
S1001	1-466-238-11	ENCODER, ROTARY	



Ref. No.	Part No.	Description	Remark			
R26	1-216-676-11	METAL CHIP	11K	0.5%	1/10W	
R27	1-216-668-11	METAL CHIP	5.1K	0.5%	1/10W	
R28	1-216-697-11	METAL CHIP	82K	0.5%	1/10W	
R29	1-216-668-11	METAL CHIP	5.1K	0.5%	1/10W	
R30	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W	
R31	1-216-680-11	METAL CHIP	16K	0.5%	1/10W	
R32	1-216-685-11	METAL CHIP	27K	0.5%	1/10W	
R33	1-216-080-00	METAL CHIP	20K	5%	1/10W	
R34	1-216-684-11	METAL CHIP	24K	0.5%	1/10W	
R35	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R36	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R37	1-216-074-00	METAL CHIP	11K	5%	1/10W	
R38	1-216-086-00	METAL GLAZE	36K	5%	1/10W	
R39	1-216-066-00	METAL CHIP	5.1K	5%	1/10W	
R40	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R41	1-216-078-00	METAL GLAZE	16K	5%	1/10W	
R42	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R43	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R44	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R45	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R53	1-216-058-00	METAL GLAZE	2.4K	5%	1/10W	
R54	1-216-675-11	METAL CHIP	10K	0.5%	1/10W	
R55	1-216-666-11	METAL CHIP	4.3K	0.5%	1/10W	
*****						
*	A-2006-961-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K707ES:US, Canadian)				
*	A-2006-962-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K711S)				
*	A-2006-963-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K611:US, Canadian, AEP, G)				
*	A-2007-037-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K707ES:AUS)				
*	A-2007-038-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K611S:UK, AUS)				
*	A-2007-045-A	MAIN BOARD, COMPLETE (INCLUDING DOLBY (S) BOARD) (K707ES:E)				
*****						
*	3-356-925-01	HEAT SINK				
	7-685-871-01	SCREW +BVTT 3X6 (S)				
< CAPACITOR >						
C101	1-126-059-11	ELECT	10uF	20%	50V	
C102	1-162-282-31	CERAMIC	100PF	10%	50V	
C103	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C104	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C105	1-136-174-00	FILM	0.56uF	5%	50V	
C106	1-136-171-00	FILM	0.33uF	5%	50V	
C107	1-126-059-11	ELECT	10uF	20%	50V	
C108	1-124-657-00	ELECT	10uF	20%	50V	
C110	1-161-494-00	CERAMIC	0.022uF		25V	

Ref. No.	Part No.	Description	Remark		
C111	1-124-907-11	ELECT	10uF	20%	50V
C112	1-124-916-11	ELECT	22uF	20%	63V
C113	1-124-907-11	ELECT	10uF	20%	50V
C121	1-110-335-11	MYLAR (K707ES)	100PF	5%	50V
C121	1-110-340-11	MYLAR (K711S, K611S)	270PF	5%	50V
C122	1-162-282-31	CERAMIC	100PF	10%	50V
C123	1-130-487-00	MYLAR	0.022uF	5%	50V
C124	1-124-657-00	ELECT	10uF	20%	50V
C125	1-130-488-00	MYLAR	0.027uF	5%	50V
C126	1-130-474-00	MYLAR	0.0018uF	5%	50V
C127	1-102-521-11	CERAMIC	43PF	5%	50V
C128	1-130-474-00	MYLAR	0.0018uF	5%	50V
C131	1-130-475-00	MYLAR	0.0022uF	5%	50V
C132	1-130-475-00	MYLAR	0.0022uF	5%	50V
C133	1-136-174-00	FILM	0.56uF	5%	50V
C134	1-136-171-00	FILM	0.33uF	5%	50V
C135	1-124-657-00	ELECT	10uF	20%	50V
C141	1-136-175-00	FILM	0.68uF	5%	50V
C142	1-126-059-11	ELECT	10uF	20%	50V
C143	1-126-059-11	ELECT	10uF	20%	50V
C144	1-110-338-51	MYLAR	180PF	5%	50V
C145	1-136-935-11	FILM	22PF	5%	630V
C146	1-130-475-00	MYLAR	0.0022uF	5%	50V
C161	1-124-925-11	ELECT	2.2uF	20%	100V
C162	1-124-907-11	ELECT	10uF	20%	50V
C163	1-124-916-11	ELECT	22uF	20%	63V
C164	1-124-907-11	ELECT	10uF	20%	50V
C181	1-136-153-00	FILM	0.01uF	5%	50V
C182	1-136-157-00	FILM	0.022uF	5%	50V
C183	1-136-161-00	FILM	0.047uF	5%	50V
C184	1-136-803-11	FILM	560PF	5%	630V
C185	1-136-433-11	FILM	100PF	5%	630V
C186	1-130-468-00	MYLAR	560PF	5%	50V
C201	1-126-059-11	ELECT	10uF	20%	50V
C202	1-162-282-31	CERAMIC	100PF	10%	50V
C203	1-130-475-00	MYLAR	0.0022uF	5%	50V
C204	1-130-475-00	MYLAR	0.0022uF	5%	50V
C205	1-136-174-00	FILM	0.56uF	5%	50V
C206	1-136-171-00	FILM	0.33uF	5%	50V
C207	1-126-059-11	ELECT	10uF	20%	50V
C208	1-124-657-00	ELECT	10uF	20%	50V
C210	1-161-494-00	CERAMIC	0.022uF		25V
C211	1-124-907-11	ELECT	10uF	20%	50V
C212	1-124-916-11	ELECT	22uF	20%	63V
C213	1-124-907-11	ELECT	10uF	20%	50V
C221	1-110-335-11	MYLAR (K707ES)	100PF	5%	50V

Ref. No.	Part No.	Description		Remark	
C221	1-110-340-11	MYLAR (K711S, K611S)	270PF	5%	50V
C222	1-162-282-31	CERAMIC	100PF	10%	50V
C223	1-130-487-00	MYLAR	0.022uF	5%	50V
C224	1-124-657-00	ELECT	10uF	20%	50V
C225	1-130-488-00	MYLAR	0.027uF	5%	50V
C226	1-130-474-00	MYLAR	0.0018uF	5%	50V
C227	1-102-521-11	CERAMIC	43PF	5%	50V
C228	1-130-474-00	MYLAR	0.0018uF	5%	50V
C231	1-130-475-00	MYLAR	0.0022uF	5%	50V
C232	1-130-475-00	MYLAR	0.0022uF	5%	50V
C233	1-136-174-00	FILM	0.56uF	5%	50V
C234	1-136-171-00	FILM	0.33uF	5%	50V
C235	1-124-657-00	ELECT	10uF	20%	50V
C241	1-136-175-00	FILM	0.68uF	5%	50V
C242	1-126-059-11	ELECT	10uF	20%	50V
C243	1-126-059-11	ELECT	10uF	20%	50V
C244	1-110-338-51	MYLAR	180PF	5%	50V
C245	1-136-935-11	FILM	22PF	5%	630V
C246	1-130-475-00	MYLAR	0.0022uF	5%	50V
C261	1-124-925-11	ELECT	2.2uF	20%	100V
C262	1-124-907-11	ELECT	10uF	20%	50V
C263	1-124-916-11	ELECT	22uF	20%	63V
C264	1-124-907-11	ELECT	10uF	20%	50V
C281	1-136-153-00	FILM	0.01uF	5%	50V
C282	1-136-157-00	FILM	0.022uF	5%	50V
C283	1-136-161-00	FILM	0.047uF	5%	50V
C284	1-136-803-11	FILM	560PF	5%	630V
C285	1-136-433-11	FILM	100PF	5%	630V
C286	1-130-468-00	MYLAR	560PF	5%	50V
C501	1-126-022-11	ELECT	47uF	20%	25V
C502	1-126-022-11	ELECT	47uF	20%	25V
C503	1-130-478-00	MYLAR	0.0039uF	5%	50V
C504	1-136-164-00	FILM	0.082uF	5%	50V
C505	1-124-902-00	ELECT	0.47uF	20%	50V
C507-509	1-124-925-11	ELECT	2.2uF	20%	100V
C510	1-124-907-11	ELECT	10uF	20%	50V
C511	1-136-161-00	FILM	0.047uF	5%	50V
C521	1-124-994-11	ELECT	100uF	20%	10V
C522	1-124-994-11	ELECT	100uF	20%	10V
C531	1-126-022-11	ELECT	47uF	20%	25V
C532	1-126-022-11	ELECT	47uF	20%	25V
C534	1-124-903-11	ELECT	1uF	20%	50V
C535	1-124-907-11	ELECT	10uF	20%	50V
C536	1-124-907-11	ELECT	10uF	20%	50V
C542	1-124-907-11	ELECT	10uF	20%	50V
C543	1-124-907-11	ELECT	10uF	20%	50V
C563	1-162-217-31	CERAMIC	56PF	5%	50V

Ref. No.	Part No.	Description		Remark	
C564	1-136-157-00	FILM	0.022uF	5%	50V
C565	1-162-217-31	CERAMIC	56PF	5%	50V
C566	1-124-925-11	ELECT	2.2uF	20%	100V
C583	1-124-907-11	ELECT	10uF	20%	50V
C584	1-124-477-11	ELECT	47uF	20%	25V
C585	1-124-477-11	ELECT	47uF	20%	25V
C586	1-136-593-11	FILM (K707ES, K711S)	0.0033uF	5%	100V
C586	1-136-253-11	FILM (K611S)	0.0018uF	5%	100V
C587	1-136-593-11	FILM (K707ES, K711S)	0.0033uF	5%	100V
C587	1-136-253-11	FILM (K611S)	0.0018uF	5%	100V
C588	1-130-955-00	FILM (K707ES, K711S)	0.01uF	5%	100V
C588	1-136-233-11	FILM (K611S)	0.0047uF	5%	100V
C589	1-136-177-00	FILM	1uF	5%	50V
C590	1-124-907-11	ELECT	10uF	20%	50V
C591	1-107-045-00	MICA	3.9PF		500V
C592	1-136-559-11	FILM (K707ES, K711S)	0.0047uF	5%	630V
C592	1-136-558-11	FILM (K611S)	0.0039uF	5%	630V
C593	1-124-907-11	ELECT	10uF	20%	50V
C594	1-124-907-11	ELECT	10uF	20%	50V
C701	1-162-294-31	CERAMIC	0.001uF	10%	50V
C702	1-162-294-31	CERAMIC	0.001uF	10%	50V
C703	1-124-902-00	ELECT	0.47uF	20%	50V
C704	1-164-159-11	CERAMIC	0.1uF		50V
C705	1-164-159-11	CERAMIC	0.1uF		50V
C707	1-126-923-11	ELECT	220uF	20%	10V
C708	1-124-477-11	ELECT	47uF	20%	25V
C709	1-124-907-11	ELECT	10uF	20%	50V
C710-713	1-164-159-11	CERAMIC	0.1uF		50V
C803	1-124-556-11	ELECT	2200uF	20%	16V
C804	1-124-556-11	ELECT	2200uF	20%	16V
C806	1-124-477-11	ELECT	47uF	20%	25V
C808	1-124-999-11	ELECT	2200uF	20%	10V
C809	1-124-999-11	ELECT	2200uF	20%	10V
C810	1-124-907-11	ELECT	10uF	20%	50V
C811	1-126-936-11	ELECT	3300uF	20%	16V
C813	1-124-907-11	ELECT	10uF	20%	50V
C814	1-126-916-11	ELECT	1000uF	20%	6.3V
C815	1-124-564-11	ELECT	4700uF	20%	25V
C816	1-124-907-11	ELECT	10uF	20%	50V
C817	1-126-768-11	ELECT	2200uF	20%	16V
C818	1-124-122-11	ELECT	100uF	20%	50V

# MAIN

Ref. No.	Part No.	Description	Remark
C819	1-126-947-11	ELECT	47uF 20% 35V
C820	1-164-159-11	CERAMIC	0.1uF 50V

## < CONNECTOR >

* CN521	1-568-830-11	SOCKET, CONNECTOR 11P	
* CN701	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P (EXCEPT E)	
* CN801	1-568-841-11	SOCKET, CONNECTOR 25P	
CN802	1-568-802-11	SOCKET, CONNECTOR 19P	
* CND512	1-564-339-00	PIN, CONNECTOR 5P	
* CND518	1-564-337-00	PIN, CONNECTOR 3P	
* CND801	1-564-337-61	PIN, CONNECTOR 3P	
* CNE501	1-564-521-11	PLUG, CONNECTOR 6P	
* CNE522	1-564-505-41	PLUG, CONNECTOR 2P (K707ES, K711S)	
* CNE701	1-564-506-11	PLUG, CONNECTOR 3P	
* CNE702	1-564-505-11	PLUG, CONNECTOR 2P	
* CNE801	1-564-513-11	PLUG, CONNECTOR 10P	
* CNN515	1-560-062-00	PIN, CONNECTOR 4P	
* CNN516	1-560-062-00	PIN, CONNECTOR 4P	
* CNN517	1-560-061-00	PIN, CONNECTOR 3P (K707ES, K711S)	
* CNN517	1-560-060-00	PIN, CONNECTOR 2P (K611S)	
* CNP513	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
* CNP514	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	

## < DIODE >

D101	8-719-987-63	DIODE	1N4148M
D102	8-719-987-63	DIODE	1N4148M
D201	8-719-987-63	DIODE	1N4148M
D202	8-719-987-63	DIODE	1N4148M
D501-517			

8-719-987-63	DIODE	1N4148M
--------------	-------	---------

D518-521			
8-719-107-94	DIODE	1SS202-1	
D522	8-719-987-63	DIODE	1N4148M
D701-707			

	8-719-987-63	DIODE	1N4148M
D708	8-719-933-33	DIODE	HZS6A1L
D709	8-719-933-33	DIODE	HZS6A1L

D712-715			
8-719-987-63	DIODE	1N4148M	
D718	8-719-987-63	DIODE	1N4148M
D801-804			

8-719-200-77	DIODE	10E2N	
D805	8-719-933-33	DIODE	HZS6A1L
D806	8-719-933-33	DIODE	HZS6A1L

D807	8-719-987-63	DIODE	1N4148M
D812	8-719-987-63	DIODE	1N4148M
D813	8-719-200-31	DIODE	21DQ05
D814	8-719-000-78	DIODE	UZL-7L2
D815	8-719-987-63	DIODE	1N4148M

Ref. No.	Part No.	Description	Remark
----------	----------	-------------	--------

D816	8-719-987-63	DIODE	1N4148M
D817	8-719-001-70	DIODE	UZL-12M1
D818	8-719-200-77	DIODE	10E2N
D819	8-719-200-77	DIODE	10E2N
D820	8-719-000-93	DIODE	UZL-7H1

D822	8-719-987-63	DIODE	1N4148M
D823	8-719-312-09	DIODE	RBA-402

## < IC >

IC501	8-752-059-55	IC	CXA1331S
IC502	8-759-000-49	IC	MC14066BCP
IC503	8-752-060-64	IC	CXA1198AP
IC504	8-759-106-56	IC	uPC1297CA
IC505	8-759-111-44	IC	uPC4570C-1

IC506	8-752-059-55	IC	CXA1331S
IC507	8-759-634-51	IC	M5218AP
IC508	8-759-145-58	IC	uPC4558C
IC509	8-759-145-58	IC	uPC4558C
IC510	8-759-634-50	IC	M5218AL

IC511	8-759-000-49	IC	MC14066BCP
IC512	8-759-000-49	IC	MC14066BCP
IC701	8-759-060-83	IC	M50941-728SP
IC702	8-759-240-69	IC	TC4069UBP
IC703	8-759-973-95	IC	BA6219B

IC704	8-759-822-09	IC	LB1641
IC801	8-759-145-58	IC	uPC4558C

## < JACK >

J501	1-573-070-11	JACK, PIN 4P (LINE IN/OUT) (K707ES)	
J501	1-565-258-11	JACK, PIN 4P (LINE IN/OUT) (K711S, K611S)	
J502	1-507-796-71	JACK (HEADPHONES)	

## < COIL >

L121	1-410-778-11	INDUCTOR	18mH
L141	1-410-780-11	INDUCTOR	27mH
L221	1-410-778-11	INDUCTOR	18mH
L241	1-410-780-11	INDUCTOR	27mH

## < FILTER >

LPF101	1-239-599-11	FILTER, LOW PASS	
LPF201	1-239-599-11	FILTER, LOW PASS	

## < TRANSISTOR >

Q101	8-729-142-25	TRANSISTOR	2SD1020-HFE
Q102	8-729-142-25	TRANSISTOR	2SD1020-HFE
Q103	8-729-900-74	TRANSISTOR	DTC143TS
Q104	8-729-900-80	TRANSISTOR	DTC114ES
Q201	8-729-142-25	TRANSISTOR	2SD1020-HFE



Ref. No.	Part No.	Description	Remark
Q202	8-729-142-25	TRANSISTOR 2SD1020-HFE	
Q203	8-729-900-74	TRANSISTOR DTC143TS	
Q204	8-729-900-80	TRANSISTOR DTC114ES	
Q501	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q502	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q503	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q504	8-729-900-80	TRANSISTOR DTC114ES	
Q505	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q506	8-729-142-25	TRANSISTOR 2SD1020-HFE	
Q507	8-729-900-80	TRANSISTOR DTC114ES	
Q508	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q509	8-729-900-80	TRANSISTOR DTC114ES	
Q510	8-729-900-80	TRANSISTOR DTC114ES	
Q511	8-729-194-57	TRANSISTOR 2SC945-P	
Q512	8-729-194-57	TRANSISTOR 2SC945-P	
Q513-517			
	8-729-900-80	TRANSISTOR DTC114ES	
Q518	8-729-900-89	TRANSISTOR DTC144ES	
Q519	8-729-900-89	TRANSISTOR DTC144ES	
Q701-708			
	8-729-900-61	TRANSISTOR DTA114ES	
Q709	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q710	8-729-900-80	TRANSISTOR DTC114ES	
Q711	8-729-900-65	TRANSISTOR DTA144ES	
Q712	8-729-900-80	TRANSISTOR DTC114ES	
Q713	8-729-900-65	TRANSISTOR DTA144ES	
Q714	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q715	8-729-900-89	TRANSISTOR DTC144ES	
Q716	8-729-900-89	TRANSISTOR DTC144ES	
Q717-722			
	8-729-900-61	TRANSISTOR DTA114ES	
Q723	8-729-900-65	TRANSISTOR DTA144ES	
Q724	8-729-900-65	TRANSISTOR DTA144ES	
Q725	8-729-900-80	TRANSISTOR DTC114ES	
Q726	8-729-900-65	TRANSISTOR DTA144ES	
Q727	8-729-900-65	TRANSISTOR DTA144ES	
Q729	8-729-900-61	TRANSISTOR DTA114ES	
Q801	8-729-900-61	TRANSISTOR DTA114ES	
Q802	8-729-900-80	TRANSISTOR DTC114ES	
Q803	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q804	8-729-209-15	TRANSISTOR 2SD2012	
Q805	8-729-209-15	TRANSISTOR 2SD2012	
Q806	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q807	8-729-900-80	TRANSISTOR DTC114ES	
Q808	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q809	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q810	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q811	8-729-140-04	TRANSISTOR 2SB1116A-L	

Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
R101	1-259-460-11	CARBON 22K 5%	1/6W
R104	1-259-440-11	CARBON 3.3K 5%	1/6W
R105	1-259-450-11	CARBON 8.2K 5%	1/6W
R106	1-259-461-11	CARBON 24K 5%	1/6W
R107	1-259-422-11	CARBON 560 5%	1/6W
R109	1-259-436-11	CARBON 2.2K 5%	1/6W
R110	1-259-436-11	CARBON 2.2K 5%	1/6W
R111	1-259-467-11	CARBON 43K 5%	1/6W
R112	1-259-428-11	CARBON 1K 5%	1/6W
R113	1-259-476-11	CARBON 100K 5%	1/6W
R115	1-259-436-11	CARBON 2.2K 5%	1/6W
R116	1-259-452-11	CARBON 10K 5%	1/6W
R117	1-259-452-11	CARBON 10K 5%	1/6W
R118	1-259-447-11	CARBON 6.2K 5%	1/6W
R119	1-259-456-11	CARBON 15K 5%	1/6W
R120	1-259-468-11	CARBON 47K 5%	1/6W
R121	1-259-466-11	CARBON 39K 5%	1/6W
		(K707ES)	
R121	1-259-476-11	CARBON 100K 5%	1/6W
		(K711S, K611S)	
R122	1-259-402-11	CARBON 82 5%	1/6W
R123	1-259-479-11	CARBON 130K 5%	1/6W
R124	1-259-446-11	CARBON 5.6K 5%	1/6W
R125	1-259-434-11	CARBON 1.8K 5%	1/6W
R126	1-259-435-11	CARBON 2K 5%	1/6W
R127	1-259-484-11	CARBON 220K 5%	1/6W
R134	1-259-461-11	CARBON 24K 5%	1/6W
R135	1-259-422-11	CARBON 560 5%	1/6W
R142	1-259-442-11	CARBON 3.9K 5%	1/6W
R143	1-259-440-11	CARBON 3.3K 5%	1/6W
R144	1-259-452-11	CARBON 10K 5%	1/6W
R145	1-259-436-11	CARBON 2.2K 5%	1/6W
R146	1-259-444-11	CARBON 4.7K 5%	1/6W
R147	1-259-444-11	CARBON 4.7K 5%	1/6W
R148	1-259-484-11	CARBON 220K 5%	1/6W
R151	1-259-460-11	CARBON 22K 5%	1/6W
R152	1-259-436-11	CARBON 2.2K 5%	1/6W
R153	1-259-459-11	CARBON 20K 5%	1/6W
R154	1-259-412-11	CARBON 220 5%	1/6W
R161	1-259-462-11	CARBON 27K 5%	1/6W
R162	1-259-471-11	CARBON 62K 5%	1/6W
R163	1-259-414-11	CARBON 270 5%	1/6W
R164	1-259-456-11	CARBON 15K 5%	1/6W
R165	1-259-431-11	CARBON 1.3K 5%	1/6W
R166	1-259-436-11	CARBON 2.2K 5%	1/6W
R167	1-259-458-11	CARBON 18K 5%	1/6W
R168	1-259-468-11	CARBON 47K 5%	1/6W

# MAIN

Ref. No.	Part No.	Description	Remark
R181	1-259-450-11	CARBON (K707ES)	8. 2K 5% 1/6W
R181	1-259-446-11	CARBON (K711S, K611S)	5. 6K 5% 1/6W
R182	1-259-464-11	CARBON	33K 5% 1/6W
△R183	1-219-153-11	FUSIBLE	10 5% 1/4W F
R184	1-247-883-00	CARBON	150K 5% 1/4W
R201	1-259-460-11	CARBON	22K 5% 1/6W
R204	1-259-440-11	CARBON	3. 3K 5% 1/6W
R205	1-259-450-11	CARBON	8. 2K 5% 1/6W
R206	1-259-461-11	CARBON	24K 5% 1/6W
R207	1-259-422-11	CARBON	560 5% 1/6W
R209	1-259-436-11	CARBON	2. 2K 5% 1/6W
R210	1-259-436-11	CARBON	2. 2K 5% 1/6W
R211	1-259-467-11	CARBON	43K 5% 1/6W
R212	1-259-428-11	CARBON	1K 5% 1/6W
R213	1-259-476-11	CARBON	100K 5% 1/6W
R215	1-259-436-11	CARBON	2. 2K 5% 1/6W
R216	1-259-452-11	CARBON	10K 5% 1/6W
R217	1-259-452-11	CARBON	10K 5% 1/6W
R218	1-259-447-11	CARBON	6. 2K 5% 1/6W
R219	1-259-456-11	CARBON	15K 5% 1/6W
R220	1-259-468-11	CARBON	47K 5% 1/6W
R221	1-259-466-11	CARBON (K707ES)	39K 5% 1/6W
R221	1-259-476-11	CARBON (K711S, K611S)	100K 5% 1/6W
R222	1-259-402-11	CARBON	82 5% 1/6W
R223	1-259-479-11	CARBON	130K 5% 1/6W
R224	1-259-446-11	CARBON	5. 6K 5% 1/6W
R225	1-259-434-11	CARBON	1. 8K 5% 1/6W
R226	1-259-435-11	CARBON	2K 5% 1/6W
R227	1-259-484-11	CARBON	220K 5% 1/6W
R234	1-259-461-11	CARBON	24K 5% 1/6W
R235	1-259-422-11	CARBON	560 5% 1/6W
R242	1-259-442-11	CARBON	3. 9K 5% 1/6W
R243	1-259-440-11	CARBON	3. 3K 5% 1/6W
R244	1-259-452-11	CARBON	10K 5% 1/6W
R245	1-259-436-11	CARBON	2. 2K 5% 1/6W
R246	1-259-444-11	CARBON	4. 7K 5% 1/6W
R247	1-259-444-11	CARBON	4. 7K 5% 1/6W
R248	1-259-484-11	CARBON	220K 5% 1/6W
R251	1-259-460-11	CARBON	22K 5% 1/6W
R252	1-259-436-11	CARBON	2. 2K 5% 1/6W
R253	1-259-459-11	CARBON	20K 5% 1/6W
R254	1-259-412-11	CARBON	220 5% 1/6W
R261	1-259-462-11	CARBON	27K 5% 1/6W
R262	1-259-471-11	CARBON	62K 5% 1/6W
R263	1-259-414-11	CARBON	270 5% 1/6W

Ref. No.	Part No.	Description	Remark
R264	1-259-456-11	CARBON	15K 5% 1/6W
R265	1-259-431-11	CARBON	1. 3K 5% 1/6W
R266	1-259-436-11	CARBON	2. 2K 5% 1/6W
R267	1-259-458-11	CARBON	18K 5% 1/6W
R268	1-259-468-11	CARBON	47K 5% 1/6W
R281	1-259-450-11	CARBON (K707ES)	8. 2K 5% 1/6W
R281	1-259-446-11	CARBON (K711S, K611S)	5. 6K 5% 1/6W
R282	1-259-464-11	CARBON	33K 5% 1/6W
△R283	1-219-153-11	FUSIBLE	10 5% 1/4W F
R284	1-247-883-00	CARBON	150K 5% 1/4W
R501	1-249-417-11	CARBON	1K 5% 1/4W F
R502	1-215-455-00	METAL	27K 1% 1/6W
R504	1-249-413-11	CARBON (K611S)	470 5% 1/4W F
R505	1-249-427-11	CARBON	6. 8K 5% 1/4W F
R506	1-249-381-11	CARBON (K707ES, K711S)	1 5% 1/4W F
R507	1-247-848-11	CARBON	5. 1K 5% 1/4W
R508	1-249-433-11	CARBON	22K 5% 1/4W
R509	1-249-436-11	CARBON	39K 5% 1/4W
R510	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R511	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R512	1-249-441-11	CARBON	100K 5% 1/4W
R513	1-249-441-11	CARBON	100K 5% 1/4W
R514	1-247-836-11	CARBON	1. 6K 5% 1/4W
R516	1-249-437-11	CARBON	47K 5% 1/4W
R517	1-249-433-11	CARBON	22K 5% 1/4W
R518	1-249-427-11	CARBON	6. 8K 5% 1/4W F
R519	1-249-437-11	CARBON	47K 5% 1/4W
R520	1-249-434-11	CARBON	27K 5% 1/4W
R521	1-247-704-11	CARBON	220 5% 1/4W
R522	1-247-704-11	CARBON	220 5% 1/4W
R523-525			
	1-249-429-11	CARBON	10K 5% 1/4W
R526	1-249-422-11	CARBON	2. 7K 5% 1/4W F
R527	1-249-437-11	CARBON	47K 5% 1/4W
R528	1-249-441-11	CARBON	100K 5% 1/4W
R529	1-249-431-11	CARBON	15K 5% 1/4W
R531	1-249-417-11	CARBON	1K 5% 1/4W F
R532	1-215-455-00	METAL	27K 1% 1/6W
R533	1-249-437-11	CARBON	47K 5% 1/4W
R534	1-249-441-11	CARBON	100K 5% 1/4W
R535	1-215-454-00	METAL	24K 1% 1/6W
R563	1-249-441-11	CARBON	100K 5% 1/4W
R564	1-249-429-11	CARBON	10K 5% 1/4W
R565	1-249-441-11	CARBON	100K 5% 1/4W
R566	1-249-428-11	CARBON	8. 2K 5% 1/4W F
R567	1-249-441-11	CARBON	100K 5% 1/4W

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R568	1-249-423-11	CARBON	3. 3K	5%	1/4W F	R607	1-247-874-11	CARBON	62K	5%	1/4W
R569	1-249-441-11	CARBON	100K	5%	1/4W	R608	1-249-437-11	CARBON	47K	5%	1/4W
R570	1-249-429-11	CARBON	10K	5%	1/4W	R609	1-247-882-11	CARBON	130K	5%	1/4W
R571	1-249-429-11	CARBON	10K	5%	1/4W			(K707ES)			
R572	1-249-417-11	CARBON	1K	5%	1/4W F	R609	1-247-880-11	CARBON	110K	5%	1/4W
								(K711S, K611S)			
R581	1-249-429-11	CARBON	10K	5%	1/4W	R610	1-247-876-11	CARBON	75K	5%	1/4W
R582	1-249-429-11	CARBON	10K	5%	1/4W			(K707ES)			
R583	1-249-414-11	CARBON	560	5%	1/4W F						
		(K707ES)				R610	1-247-878-00	CARBON	91K	5%	1/4W
R583	1-247-822-11	CARBON	430	5%	1/4W			(K711S, K611S)			
		(K711S, K611S)				R611	1-249-438-11	CARBON	56K	5%	1/4W
R584	1-249-417-11	CARBON	1K	5%	1/4W F			(K707ES)			
R585	1-249-433-11	CARBON	22K	5%	1/4W	R611	1-249-439-11	CARBON	68K	5%	1/4W
		(K707ES)						(K711S, K611S)			
R585	1-247-862-11	CARBON	20K	5%	1/4W	R612	1-247-887-00	CARBON	220K	5%	1/4W
		(K711S, K611S)				R613	1-247-876-11	CARBON	75K	5%	1/4W
R586	1-249-417-11	CARBON	1K	5%	1/4W F			(K707ES)			
R587	1-249-436-11	CARBON	39K	5%	1/4W	R613	1-249-439-11	CARBON	68K	5%	1/4W
		(K707ES, K711S)						(K711S, K611S)			
R587	1-249-440-11	CARBON	82K	5%	1/4W (K611S)	R614	1-247-872-11	CARBON	51K	5%	1/4W
R588	1-249-436-11	CARBON	39K	5%	1/4W	R616	1-249-437-11	CARBON	47K	5%	1/4W
		(K707ES, K711S)						(K707ES)			
R588	1-249-440-11	CARBON	82K	5%	1/4W (K611S)	R616	1-247-874-11	CARBON	62K	5%	1/4W
R589	1-249-391-11	CARBON	6. 8	5%	1/4W F			(K711S, K611S)			
		(K707ES, K711S)				R617	1-249-440-11	CARBON	82K	5%	1/4W
R589	1-249-390-11	CARBON	5. 6	5%	1/6W F			(K707ES)			
		(K611S)				R617	1-247-874-11	CARBON	62K	5%	1/4W
R590	1-249-391-11	CARBON	6. 8	5%	1/4W F			(K711S, K611S)			
		(K707ES, K711S)				R618	1-247-883-00	CARBON	150K	5%	1/4W
R590	1-249-390-11	CARBON	5. 6	5%	1/6W F			(K707ES)			
		(K611S)				R618	1-247-886-11	CARBON	200K	5%	1/4W
R591	1-249-421-11	CARBON	2. 2K	5%	1/4W F			(K711S, K611S)			
R593	1-249-435-11	CARBON	33K	5%	1/4W	R619	1-249-435-11	CARBON	33K	5%	1/4W
R594	1-249-420-11	CARBON	1. 8K	5%	1/4W F	R701	1-247-887-00	CARBON	220K	5%	1/4W
R601	1-247-878-00	CARBON	91K	5%	1/4W						
		(K707ES)				R702	1-247-887-00	CARBON	220K	5%	1/4W
R601	1-249-439-11	CARBON	68K	5%	1/4W	R703	1-249-436-11	CARBON	39K	5%	1/4W
		(K711S, K611S)				R704	1-247-887-00	CARBON	220K	5%	1/4W
R602	1-249-435-11	CARBON	33K	5%	1/4W	R705	1-249-436-11	CARBON	39K	5%	1/4W
R603	1-247-878-00	CARBON	91K	5%	1/4W	R706	1-247-887-00	CARBON	220K	5%	1/4W
		(K707ES)									
R603	1-249-437-11	CARBON	47K	5%	1/4W	R707	1-249-431-11	CARBON	15K	5%	1/4W
		(K711S, K611S)				R708	1-247-868-11	CARBON	36K	5%	1/4W
R604	1-247-876-11	CARBON	75K	5%	1/4W	R709	1-249-435-11	CARBON	33K	5%	1/4W
		(K707ES)				R710	1-249-435-11	CARBON	33K	5%	1/4W
R604	1-247-874-11	CARBON	62K	5%	1/4W	R711	1-247-872-11	CARBON	51K	5%	1/4W
		(K711S, K611S)									
R605	1-249-439-11	CARBON	68K	5%	1/4W						
		(K707ES)				R712-717					
R605	1-249-441-11	CARBON	100K	5%	1/4W		1-249-435-11	CARBON	33K	5%	1/4W
		(K711S, K611S)				R719	1-249-429-11	CARBON	10K	5%	1/4W
R606	1-249-433-11	CARBON	22K	5%	1/4W	△R720	1-212-954-11	FUSIBLE	6. 8	5%	1/2W F
						R721	1-249-429-11	CARBON	10K	5%	1/4W
						R722	1-249-431-11	CARBON	15K	5%	1/4W
						R723	1-247-834-11	CARBON	1. 3K	5%	1/4W

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
R724	1-249-424-11	CARBON	3.9K 5% 1/4W F
R725	1-247-834-11	CARBON	1.3K 5% 1/4W
R726	1-249-427-11	CARBON	6.8K 5% 1/4W F
R727	1-249-430-11	CARBON	12K 5% 1/4W
△R728	1-212-952-00	FUSIBLE	5.6 5% 1/2W F
R729	1-249-435-11	CARBON	33K 5% 1/4W
R730	1-249-435-11	CARBON	33K 5% 1/4W
R731	1-249-425-11	CARBON	4.7K 5% 1/4W F
R732	1-249-417-11	CARBON	1K 5% 1/4W F
R733	1-247-903-00	CARBON	1M 5% 1/4W
R735	1-249-421-11	CARBON	2.2K 5% 1/4W F
△R736	1-212-942-00	FUSIBLE	2.2 5% 1/2W F
R737-739			
	1-249-429-11	CARBON	10K 5% 1/4W
R740	1-249-425-11	CARBON	4.7K 5% 1/4W F
R742-744			
	1-249-441-11	CARBON	100K 5% 1/4W
R745	1-249-432-11	CARBON	18K 5% 1/4W
R746-748			
	1-249-429-11	CARBON	10K 5% 1/4W
R752-754			
	1-249-441-11	CARBON	100K 5% 1/4W
R799	1-249-405-11	CARBON	100 5% 1/4W F
R802	1-249-425-11	CARBON	4.7K 5% 1/4W F
R803	1-249-420-11	CARBON	1.8K 5% 1/4W F
R804	1-249-412-11	CARBON	390 5% 1/4W F
R805	1-249-427-11	CARBON	6.8K 5% 1/4W F
R806	1-249-419-11	CARBON	1.5K 5% 1/4W F
R807	1-249-429-11	CARBON	10K 5% 1/4W
R808	1-249-419-11	CARBON	1.5K 5% 1/4W F
R809	1-249-425-11	CARBON	4.7K 5% 1/4W F
R810	1-249-409-11	CARBON	220 5% 1/4W F
R811	1-249-417-11	CARBON	1K 5% 1/4W F
R812	1-249-427-11	CARBON	6.8K 5% 1/4W F
R813	1-249-427-11	CARBON	6.8K 5% 1/4W F
R814	1-249-417-11	CARBON	1K 5% 1/4W F
R815-817			
	1-249-425-11	CARBON	4.7K 5% 1/4W F
R818	1-249-433-11	CARBON	22K 5% 1/4W
R819	1-249-436-11	CARBON	39K 5% 1/4W
R820	1-249-429-11	CARBON	10K 5% 1/4W
R821	1-249-437-11	CARBON	47K 5% 1/4W
△R825	1-219-135-11	FUSIBLE	0.15 10% 1/4W F
△R826	1-219-137-11	FUSIBLE	0.33 10% 1/4W F
< VARIABLE RESISTOR >			
RV121	1-241-629-11	RES, ADJ, CARBON 4.7K	
RV141	1-241-631-11	RES, ADJ, CARBON 22K	
RV142	1-238-019-11	RES, ADJ, CARBON 47K	
RV181	1-241-631-11	RES, ADJ, CARBON 22K	

Ref. No.	Part No.	Description	Remark
RV221	1-241-629-11	RES, ADJ, CARBON 4.7K	
RV241	1-241-631-11	RES, ADJ, CARBON 22K	
RV242	1-238-019-11	RES, ADJ, CARBON 47K	
RV281	1-241-631-11	RES, ADJ, CARBON 22K	
RV501	1-223-328-11	RES, VAR, CARBON 50K/50K (REC LEVEL)	
RV502	1-223-331-11	RES, VAR, CARBON 50K/50K (BALANCE)	
RV504	1-241-629-11	RES, ADJ, CARBON 4.7K (K707ES/K711S)	
RV505	1-223-330-11	RES, VAR, CARBON 20K/20K (PHONE LEVEL)	
RV508	1-238-021-11	RES, ADJ, CARBON 220K (K707ES)	
RV508	1-223-387-21	RES, ADJ, CARBON 330K (K711S, K611S)	
< TRANSFORMER >			
T181	1-433-344-11	TRANSFORMER, BIAS OSCILLATION	
T281	1-433-344-11	TRANSFORMER, BIAS OSCILLATION	
T501	1-433-380-11	TRANSFORMER, BIAS OSCILLATION (K707ES, K711S)	
T501	1-423-621-11	TRANSFORMER, BIAS OSCILLATION (K611S)	
< TEST PIN >			
* TP581	1-564-506-11	PLUG, CONNECTOR 3P	
< VIBRATOR >			
X701	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	
*****			
*	1-632-740-11	MD BOARD	
*****			
	3-356-631-01	HOLDER (SENSOR)	
< CONNECTOR >			
CN1001	1-506-615-11	PIN, CONNECTOR 9P	
CN1002	1-564-501-11	PIN, CONNECTOR 8P	
< IC >			
IC1001	8-749-920-97	DIODE GP2S22B	
IC1002	8-749-920-97	DIODE GP2S22B	
< RESISTOR >			
R1001	1-249-408-11	CARBON 180 5% 1/4W F	
R1002	1-249-408-11	CARBON 180 5% 1/4W F	
< SWITCH >			
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)	
S1003	1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)	
S1004	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)	
S1005	1-572-125-11	SWITCH, LEAF (FWD)	
S1006	1-572-202-11	SWITCH, LEAF (HALF)	
S1007	1-572-125-11	SWITCH, LEAF (METAL)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MD

PANEL

REEL MOTOR

Ref.No.	Part No.	Description	Remark
S1008	1-572-125-11	SWITCH, LEAF (70)	
		< TERMINAL >	
* TB1001	1-694-018-11	TERMINAL (5P)	
*****			
*	A-2006-964-A	PANEL BOARD, COMPLETE	
		*****	
*	3-386-245-01	HOLDER (FL)	
		< CONNECTOR >	
* CN520	1-568-830-11	SOCKET, CONNECTOR 11P	
* CN901	1-568-841-11	SOCKET, CONNECTOR 25P	
CN902	1-568-802-11	SOCKET, CONNECTOR 19P	
		< DIODE >	
D751	8-719-987-63	DIODE 1N4148M	
D752	8-719-987-63	DIODE 1N4148M	
		< FLUORESCENT INDICATOR >	
FLT751	1-517-163-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC751	8-741-100-48	IC SBX1610-59	
		< RESISTOR >	
R141	1-259-444-11	CARBON 4.7K 5% 1/6W	
R241	1-259-444-11	CARBON 4.7K 5% 1/6W	
R592	1-249-429-11	CARBON 10K 5% 1/4W	
R749	1-247-862-11	CARBON 20K 5% 1/4W	
R750	1-247-866-11	CARBON 30K 5% 1/4W	
R751	1-249-441-11	CARBON 100K 5% 1/4W	
R755-758			
	1-249-441-11	CARBON 100K 5% 1/4W	
R759	1-247-838-00	CARBON 2K 5% 1/4W	
R760	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R761	1-249-426-11	CARBON 5.6K 5% 1/4W	
R762	1-247-856-00	CARBON 11K 5% 1/4W	
R763	1-247-838-00	CARBON 2K 5% 1/4W	
R764	1-247-866-11	CARBON 30K 5% 1/4W	
R766	1-247-838-00	CARBON 2K 5% 1/4W	
R768	1-247-852-11	CARBON 7.5K 5% 1/4W	
R769	1-247-856-00	CARBON 11K 5% 1/4W	
R770	1-249-441-11	CARBON 100K 5% 1/4W	
R790	1-249-441-11	CARBON 100K 5% 1/4W	

Ref.No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV503	1-223-329-11	RES, VAR, CARBON 5K/5K (REC LEVEL)	
RV506	1-223-327-11	RES, VAR, CARBON 10K (BIAS)	
		< SWITCH >	
S501	1-692-410-11	SWITCH, ROTARY (DOLBY NR)	
S502	1-571-305-11	SWITCH, PUSH (1 KEY) (MIX FILTER)	
S701	1-692-478-11	SWITCH, SLIDE (TIMER)	
S751	1-554-303-21	SWITCH, TACTILE (△ OPEN/CLOSE)	
S752	1-554-303-21	SWITCH, TACTILE (■)	
S753	1-554-303-21	SWITCH, TACTILE (◀)	
S754	1-554-303-21	SWITCH, TACTILE (▶)	
S755	1-554-303-21	SWITCH, TACTILE (●)	
S756	1-554-303-21	SWITCH, TACTILE (▷)	
S757	1-554-303-21	SWITCH, TACTILE (▨)	
S758	1-554-303-21	SWITCH, TACTILE (○)	
S759	1-554-303-21	SWITCH, TACTILE (RESET)	
S760	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S762	1-554-303-21	SWITCH, TACTILE (MONITOR)	
S763	1-554-303-21	SWITCH, TACTILE (CALIBRATION)	
S801	1-692-409-11	SWITCH, PUSH (1 KEY) (POWER)	
*****			
*	1-632-741-11	REEL MOTOR BOARD	
		*****	
		< CAPACITOR >	
C1051	1-124-907-11	ELECT 10uF 20% 50V	
C1052	1-124-907-11	ELECT 10uF 20% 50V	
C1053	1-164-159-11	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
* CN1051	1-564-499-11	PIN, CONNECTOR 6P	
* CN1052	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
		< RESISTOR >	
R1051	1-249-414-11	CARBON 560 5% 1/4W F	
*****			

Ref.No.	Part No.	Description	Remark
		MISCELLANEOUS *****	
	16	1-690-893-11 WIRE (FLAT TYPE) (19 CORE)	
	17	1-751-258-11 WIRE (FLAT TYPE) (25 CORE)	
	18	1-534-517-00 WIRE, FLAT TYPE (11 CORE)	
	△57	1-551-188-XX CORD, POWER (E)	
	△57	1-558-945-21 CORD, POWER (POLAR. SPT-1) (US, Canadian)	
	△61	1-696-845-11 CORD, POWER (AUS)	
	△62	1-696-586-11 CORD, POWER (UK)	
	△64	1-569-007-11 ADAPTER, CONVERSION 2P (E)	
	△65	1-575-651-21 CORD, POWER (AEP, G)	
	* 225	1-608-268-00 ERASE HEAD BOARD (K707ES, K711S)	
	D1051	8-719-980-85 DIODE SLF325C	
	HE1001	1-543-673-11 HEAD, MAGNETIC (ERASE) (K611S)	
	HE1001	1-543-836-11 HEAD, MAGNETIC (ERASE) (K707ES, K711S)	
	HRP10011	1-543-733-11 HEAD, MAGNETIC (RECORD/PLAYBACK) (K611S)	
	HRP10011	1-543-834-11 HEAD, MAGNETIC (REC/PB) (K711S)	
	HRP10011	1-543-835-11 HEAD, MAGNETIC (REC PB) (K707ES)	
	M1051	X-3356-638-1 MOTOR (REEL R) ASSY	
	M1052	X-3356-604-1 MOTOR (ASSIST) ASSY	
	M1053	X-3356-635-1 MOTOR (CAPSTAN R2) ASSY (K707ES, K711S)	
	M1053	X-3356-646-1 MOTOR (CAPSTAN V1) ASSY (K611S)	
	△PT901	1-423-475-11 TRANSFORMER, POWER (US, Canadian)	
	△PT901	1-423-476-11 TRANSFORMER, POWER (AEP, UK, G, AUS)	
	△PT901	1-423-533-11 TRANSFORMER, POWER (E)	
	S1001	1-466-238-11 ENCODER, ROTARY	
	△VS1	1-692-155-11 SELECTOR, POWER VOLTAGE (VOLTAGE) (E)	

\*\*\*\*\*

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
--	--

Ref.No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS *****	
		1-558-271-11 CORD, CONNECTION	
		1-696-170-11 CORD, CONNECTION	
	*	3-350-830-01 CUSHION	
	*	3-388-323-11 INDIVIDUAL CARTON (K707ES)	
	*	3-388-323-21 INDIVIDUAL CARTON (K711S)	
	*	3-388-323-31 INDIVIDUAL CARTON (K611S)	
		3-756-292-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, CHINESE) (K707ES: Canadian, E)	
		3-756-292-21 MANUAL, INSTRUCTION (ENGLISH) (K707ES: US, AUS)	
		3-756-293-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (K711S: AEP/K611S: Canadian, AEP)	
		3-756-293-21 MANUAL, INSTRUCTION (ENGLISH) (K611S: US, UK, AUS)	
		3-756-293-41 MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (K711S: AEP/K611S: AEP)	
		3-756-293-51 MANUAL, INSTRUCTION (GERMAN) (K711S: G/K611S: G)	
		3-756-293-61 MANUAL, INSTRUCTION (DANISH, FINNISH) (K611S: AEP)	

\*\*\*\*\*

\*\*\*\*\*  
HARDWARE LIST

\*\*\*\*\*

#1	7-621-255-20 SCREW +BVTT 2X4 (S)
#2	7-621-255-35 SCREW +BVTT 2X5 (S)
#3	7-621-772-18 SCREW +B 2X4 (K707ES, K711S)
#4	7-621-772-20 SCREW +B 2X5 (K611S)
#5	7-621-772-70 SCREW +B 2X14 (K707ES, K711S)
#6	7-621-773-86 SCREW +B 2.6X4 (K707ES)
#6	7-621-775-10 SCREW +B 2.6X4 (K711S)
#7	7-685-871-01 SCREW +BVTT 3X6 (S)
#8	7-621-849-00 SCREW (BV/RING)
#9	7-622-205-05 NUT M2 TYPE2 (K707ES, K711S)
#10	7-628-253-00 SCREW +PS 2X4 (K707ES, K711S)
#11	7-671-154-01 STENLESS BALL (K707ES, K711S)
#12	7-682-547-09 SCREW +BVTT 3X6 (S) (K707ES: US, Canadian, E, K711S, K611S)
#13	7-682-548-09 SCREW +BVTT 3X8 (S)
#14	7-682-647-01 SCREW +PS 3X6 (K707ES, K711S)
#15	7-685-133-19 SCREW +BTP 2.6X6 TYPE2 N-S
#16	7-685-532-19 SCREW +BTP 2.6X5 TYPE2 N-S (K611S)
#17	7-685-534-19 SCREW +BTP 2.6X8 TYPE2 N-S
#18	7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S (K707ES: E)
#19	7-685-870-01 SCREW +BVTT 3X5 (S) (K707ES, K711S)